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HOUSING LIKES AND DISLIKES

With Special Reference to Space Use

A Correlation of Findings
From Housing Surveys
1936 to 1950

RUDARD A. JONES
BYRON E. MUNSON

By the University of Illinois
Small Homes Council Under A
Cooperative Agreement With The
Housing and Home Finance Agency

NOT FOR PUBLICATION

HOUSING LIKES AND DISLIKES

With Special Reference to Space Use

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A Correlation by the University of
Illinois Small Homes Council of
Findings from Major Housing Surveys
Conducted from 1936 to 1950

The research and studies forming the basis for this report were performed pursuant to a contract with the Office of the Administrator, Housing and Home Finance Agency, authorized by Title III of the Housing Act of 1948, as amended. The substance of such research and studies is dedicated to the public. It is understood that the accuracy of statements or interpretations contained herein is solely the responsibility of the authors and publisher.

ACKNOWLEDGMENT

The authors of this report wish to express their appreciation to faculty members of the University of Illinois who have served on the Space Utilization Committee—Margaret Reed Corbin, Professor Richard Dewey, Professor William Kapple, Florence Van Norden, and Professor Helen McCullough—for their several contributions, and especially for their assistance in compiling the bibliography which laid the groundwork for this study. This committee was set up by William H. Scheick, former director of the Small Homes Council.

For his encouragement and interest in this analysis, the authors thank James T. Lendrum, director of the Small Homes Council. Thanks also are due Maxine Kennedy, editor of the University of Illinois Small Homes Council, for her reading of the first draft and for her helpful criticisms and suggestions. Finally, we wish to gratefully acknowledge the members of the Small Homes Council staff for their cooperation and assistance throughout this study.

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ABSTRACT

A design study in residential space use is being conducted by the University of Illinois Small Homes Council under a cooperative agreement with the Housing and Home Finance Agency of the federal government. The purpose of this investigation is to establish space standards for the design of livable small homes.

As the first phase of the study, 41 housing surveys were analyzed to determine "family-living" requirements for housing. A summary of the analysis follows.

Houses which are contemporary ("ranch" and "modern") in design have gained in popularity in recent years. The demand for houses of the "Cape Cod" type has remained fairly steady. Architectural style preferences vary somewhat by region, the preference for contemporary increasing as one moves westward.

The number of stories desired in a house is related to the style of architecture preferred. While the larger percentage of surveyees prefer 1-story houses, there is no consistent trend. The $1\frac{1}{2}$ -story house is also in demand, but houses which are two stories or more are fast losing in popularity. Preference for the latter type remain strongest in the northeastern part of the United States.

About five-tenths of the families included in the surveys want three bedrooms in their houses; three-tenths want two bedrooms; the other two-tenths want four or more bedrooms.

Although there is a growing demand for the combination living-dining room, the separate dining room is still preferred by the majority of families.

A basement is preferred by about seven-tenths of all the families surveyed. Basement demand, however, is strongly tied to region. The desire for a basement is strongest in the Northeast, especially in the rural areas. A utility room is wanted—primarily for laundry purposes—by four-tenths of the families.

If the "most wanted" house were constructed on the basis of this analysis, it would be a 1-story house of contemporary design ("ranch" or "modern") and would have a basement, a porch, and six rooms besides the bathroom. These rooms would be a kitchen with an eating space, a living room, a separate dining room, and three bedrooms.

Setting up a "most wanted" house is, however, unrealistic since such an approach does not recognize the fact that the population of the United States is made up of many socio-economic groups who do not have common

needs and attitudes. Instead of one "most wanted" house, it is necessary to think in terms of a "most wanted" house for every major segment of the population.

The evaluations of the survey findings, moreover, show the limitations of questionnaires in establishing design standards. The many variables, the lack of common terminology and clear definitions, the economically unrealistic approach of "what do you want?", and the failure on the part of some surveyees to fully appreciate space requirements for certain activities—all these are evident in the analysis.

This report clearly points up the need for laboratory study.

HOUSING LIKES AND DISLIKES

I. INTRODUCTION

This analysis of principal housing surveys conducted from 1936 through 1950 is the first phase of a design study in space use which is being made by the Small Homes Council in cooperation with the Housing and Home Finance Agency.

The study, HHFA Project No. O-T-37 "Design Criteria for Space in Dwellings," seeks to establish by research the amount of space families need in their homes and how that space should be arranged. The project involves a coordinated laboratory and field method of conducting a study of residential space utilization.

The problem has been undertaken because housing has not kept pace with rapidly changing living habits which have resulted from the changing economic and social patterns of the past few decades and the introduction of new equipment for simplifying household tasks. Space standards for new houses are based on living patterns of the last century with slight modifications forced by technological advances. The lack of workable space standards for residences has handicapped the improvement of house design.

Instead of merely refining old rules of thumb, problems of space allotment and arrangement are being re-examined with emphasis placed on scientific experiment. Intensive investigation is to be made of the living habits of families and their needs and preferences as to space use.

The housing survey analysis is the starting point for this study. It was undertaken to find out preferences in home planning and design, and also the use made of various rooms in the house.

The second phase of this research investigation is a livability survey which is being conducted by Byron E. Munson, research associate in the Department of Sociology and Anthropology, to detect the householder's reaction to the space in which he is now living.

Space standards will be set up for activities, storage and equipment in the third and final phase of the study—the laboratory phase.

Members of several University of Illinois departments, which are interested in housing, are cooperating with the Small Homes Council in carrying on the study. Professor Rudard A. Jones, Small Homes Council architect, is project director. Other members of the committee are Professor Richard Dewey, Department of Sociology and Anthropology; Professor William H. Kapple, research architect in the Small Homes Council; and Miss Helen McCullough, assistant professor in the Department of Home Economics.

II. PURPOSE AND SCOPE

An analysis of 41 surveys concerned with homeowners' and renters' use of, and preference for, various features of the house is presented in this report. In addition to the survey findings themselves, the report includes an evaluation of the findings in light of recent philosophy and planning concepts related to family living and house design. To make this evaluation, 76 research studies and books were reviewed.

The analysis was made 1) to provide a starting point for HHFA Project No. O-T-37, "Design Criteria for Space in Dwellings", and 2) to determine the character and extent of new data required for establishing space standards for small homes.

For the purposes of this study, the surveys were analyzed in terms of the room and room use as designated in the various surveys, rather than in terms of relation to activities. While it is recognized that an analysis on the basis of activities would be desirable, the arrangement and tabulation of the material in the surveys themselves made such an activity analysis impossible.

In summarizing the data obtained from the 41 surveys, an attempt has been made to arrive at trends in home planning and construction and to determine an "average" demand for each of the housing features considered. This "average" demand was determined by 1) listing the various percentages for each feature; 2) eliminating those percentages that obviously distorted the picture; and 3) arriving at an average by judgment. Originally, the plan was to determine the exact percentage of people wanting each feature by 1) taking all the surveys and totaling the number who preferred each feature, and then 2) dividing this figure by the total number of families covered by all of the surveys. The latter plan was abandoned because it did not give as true a picture as the method used.

Though "average" demands are presented, the limitations of these percentages must be recognized. One needs to visualize and provide for the family functions in terms of the particular social group under consideration--i.e., low-income, high-income; rural, urban.

In a dynamic and increasingly heterogeneous society such as is found in the United States, it is impractical to think of designing a house in terms of the "average" family. The "average" family today simply does not exist. There are too many socio-economic groups. Presumably "average" refers to the middle-income family of four members since, according to the 1948 census reports,¹ the average size of the family is 3.57. Actually, however, only 19.9 per cent of all families consist of four members;

¹Current Population Reports, "Population Characteristics", Bureau of Census, Series P-20, No. 17, May 19, 1948, p. 10.

whereas, 31.7 per cent of the families consist of two members. One can readily understand that the needs of a childless family in the middle to upper socio-economic class vary greatly from those of a lower socio-economic-class family with several children.

Tables and charts are used throughout this report to point up the trends and permit the reader to see the basis for the conclusions herein reached.

III. THE HOUSE

ARCHITECTURAL STYLES

Style Preference--Analysis

In general, there seems to be a trend in style preference toward "modern" and "ranch" style houses, although "Cape Cod" continues to hold its own. (See Chart I and Survey 2 in Table 1.)

About three-tenths of the total number of people included in these surveys want contemporary houses ("ranch" and "modern"); two-tenths want miscellaneous nondescript styles, such as "cottage" or "American farm"; one-tenth want "Cape Cod"; and one-tenth want "English", "French Provincial", etc. About three-tenths are undecided as to architectural style.

It will be noted that preferences vary significantly between rural and urban areas. According to Survey 37, "bungalow", "cottage" and "American farm" were by far the most popular among rural families. These styles were preferred more than twice as often by rural families as they were by urban families; moreover, there appeared to be an increasing demand for them.

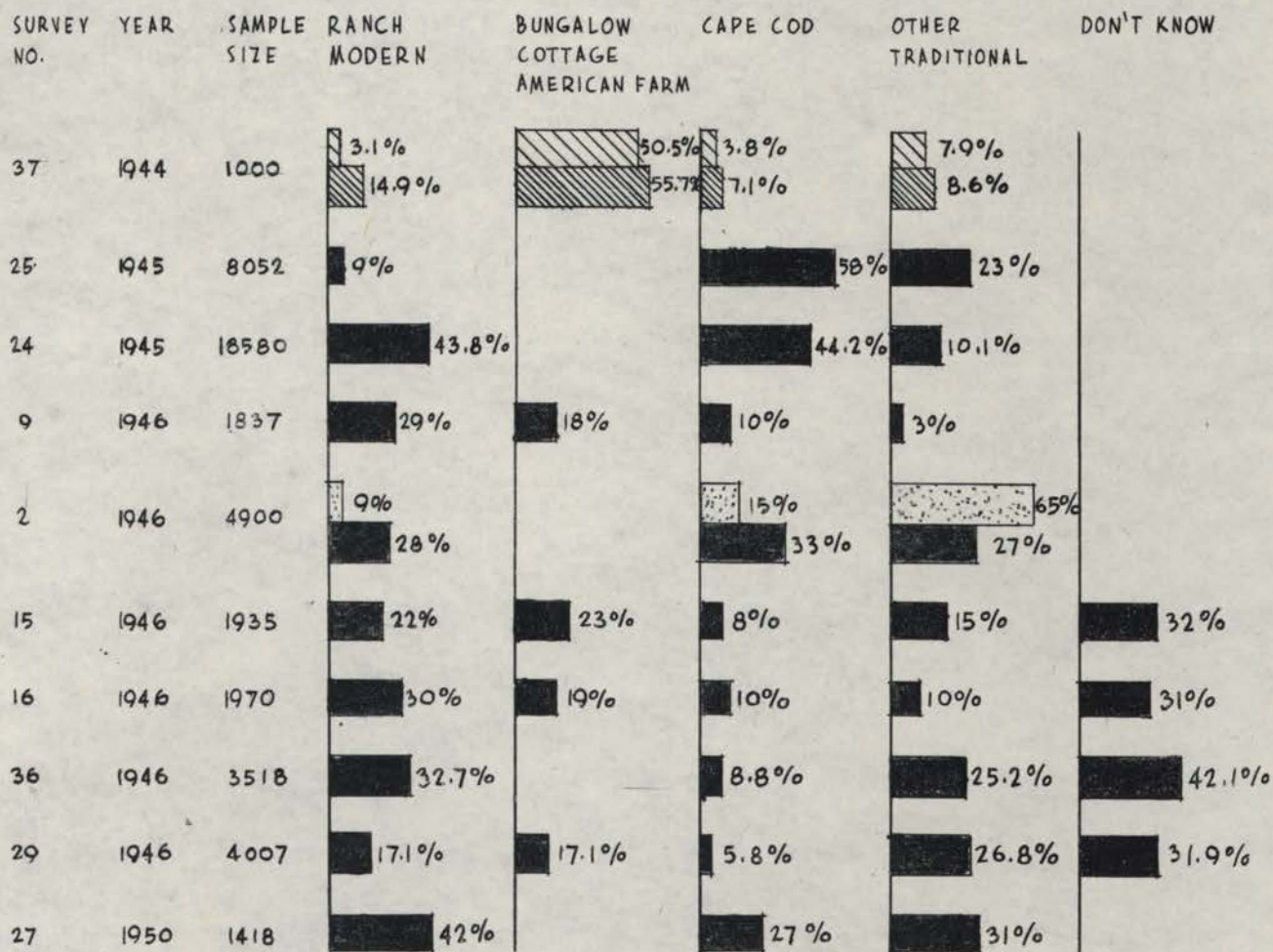
According to surveys concerned with styles (Nos. 2 and 27 in Table 2), New England represented the stronghold of the traditional type of architecture, especially "Cape Cod." The Pacific Coast area favored the contemporary trend ("modern", "ranch" house).

Comments and Evaluation

Attitudes as to style of architecture vary from one section of the United States to another. Contemporary gains in popularity as one goes from East to West.

Preferences, as determined by surveys, however, are not very meaningful because of the lack of a clear understanding among surveyees as to what the various architectural styles refer. For that matter, architects are not in full agreement on the definition of some of the architectural styles.

The trend in architectural thinking is opposed to the idea of stylistic architecture as expressed in these surveys. The majority of home planners feel that the primary consideration in house planning is a convenient and functional arrangement--and not the exterior style. The appearance of the house follows the arrangement. Good architecture produces its own "style."









 SURVEY OF RURAL AREAS
 PRESENT
 POST-WAR
 SURVEYS OF GENERAL AREAS
 PRE-WAR
 POST-WAR

CHART I.
PREFERRED ARCHITECTURAL STYLES

TABLE 1. ARCHITECTURAL STYLES

Survey	Sample	Findings			
(23) "Small House Preview," Architectural Forum, pp. 406-420, Nov. 1936.	A mail survey of 11,207 families determining what people like. 21% may build or buy within the next 2 years.	Style			Percent
		Dutch Colonial			21
		Cape Cod			17
		Georgian			10
		Southern Colonial			6
		American Farmhouse			5
		English			59
		Modern			22
		Spanish			11
		Mediterranean			3
		French Provincial			2
(37) <u>What a Thousand Farm Families are Going to do About Building, Successful Farming, Sept. 1944.</u>	A survey of readers of <u>Successful Farming</u> . 1,000 families planning to build or remodel answered the mail questionnaire.	Style	Present	Postwar	
		Cottage	Home	Home	
		American Farm	17.3%	44.2 %	
		Modern	22.2	11.5	
		Colonial	.3	9.0	
		Cape Cod	7.9	8.6	
		Ranch House	3.8	7.1	
			2.8	5.9	
(25) <u>The Forum Study of The House Market, Crossley Inc., Architectural Forum, Sept. 1945.</u>	A survey of 8,052 families who plan to build new houses.	Style	First	Second	
		Cape Cod	Choice	Choice	
		Colonial	58%	14%	
		French Provincial	18	21	
		Modern	5	12	
		Modified Modern	4	6	
			5	26	

TABLE 1. ARCHITECTURAL STYLES (contd.)

Survey	Sample	Findings		
(24) <u>The American Woman's Home of Tomorrow</u> , Part I Architectural Forum, Sept. 1945.	A survey of readers of <u>McCall's Magazine</u> , a mail questionnaire with 18,580 participating. 78.3% will build or buy new homes.	<u>Style</u>	<u>Percent</u>	
		Cape Cod	44.4	
		Modern	31.0	
		Ranch House	12.8	
		Dutch Colonial	6.0	
		Georgian	1.7	
		Southern Colonial	1.1	
		English or Tudor	.9	
		Monterey	.4	
(9) <u>Collier's Families Report their Housing Plans for Tomorrow</u> , Crowell-Colliers Research Project, June 1946.	Questionnaires were mailed to 3,000 representative <u>Collier</u> reader families. 1,837 families (61%) answered this questionnaire. 16% will build and 10% will buy a house.	<u>Style</u>	<u>Percent</u>	
		Bungalow	18	
		Modern	17	
		Ranch	12	
		Cape Cod	10	
		Spanish	3	
(2) <u>Behind the Blueprints, Better Homes and Gardens</u> , Meredith Pub. Co., Des Moines, Ia., 1946.	A survey of 4,900 families who definitely plan to build a new home. Questionnaires were mailed and 42% were returned.	<u>Style</u>	<u>Prewar Home</u>	<u>Postwar Home</u>
			Cape Cod	33%
			English	5
			N. England Colonial	9
			Georgian	4
			Contemporary	12
			Dutch Colonial	5
			Ranch House	16
			Southern Colonial	4
			Other	9
			15 %	

TABLE 1. ARCHITECTURAL STYLES (contd.)

Survey	Sample	Findings	
(15) <u>Houses</u> , Woman's Home Companion, Crowell-Collier Pub. Co., New York, N.Y., May 1946.	A survey of <u>Woman's Home Companion</u> subscribers. 1,935 answered a mail questionnaire (65% returns). 16% will build and 9% will buy a new house in the next two years.	<u>Style</u> Bungalow Modern Cape Cod Ranch Early American Dutch Colonial Southern Colonial Spanish English Georgian Undecided	<u>Percent</u> 23 15 8 7 5 4 2 2 1 1 32
(16) <u>Housing Plans of Families</u> , The American Magazine, Crowell-Collier Pub. Co., New York, N.Y., June 1946.	A survey of readers of <u>The American Magazine</u> . 1,970 answered a mail questionnaire (66% returns). 27% of this group intend to buy or build new homes.	<u>Style</u> Bungalow Modern Ranch Cape Cod Early American Dutch Colonial Spanish Southern Colonial English Other Don't know	<u>Percent</u> 19 19 11 10 3 2 2 1 1 1 31

TABLE 1. ARCHITECTURAL STYLES (Contd.)

Survey	Sample	Findings		
(36) <u>What Kind of Homes do Families with Children Want?</u> Parents' Magazine Home Building Study, 1946.	A survey of readers (with children) of <u>Parents' Magazine</u> . 3,653 families answered the mail questionnaire (26.5% returns). 71.4% of this group plan to build or buy a new home.	<u>Style</u>	<u>Percent*</u>	<u>Percent**</u>
		Modern	35.4	20.9
		Ranch	19.9	11.8
		Colonial	16.0	9.5
		Cape Cod	14.8	8.8
		Georgian, Spanish or other	11.6	6.9
		Not stated	2.2	1.3
		No answer	- -	30.8
(29) <u>Urban Housing Survey</u> , Saturday Evening Post, Research Dept., Curtis Pub. Co., 1946.	4,007 families in 35 states and 118 urban centers were interviewed. 55 to 60% of the interviews were with renters, and 40% to 45% were with home owners. 34.3% of the whole group expect to build or buy a house.	<u>Style</u>	<u>Percent</u>	
		Colonial, Early American	18.8	
		Bungalow	17.1	
		Modern	11.8	
		Cape Cod	5.8	
		Ranch-patio	5.3	
		English	3.4	
		Other Misc. styles	8.1	
(27) <u>The New House Next Door</u> , Better Homes and Gardens, Des Moines, Ia., 1950.	1,960 questionnaires were mailed to families building new homes and 1,418 were returned (72%).	<u>Style</u>	<u>Percent</u>	
		Cape Cod	27	
		Colonial	10	
		Contemporary	18	
		Ranch House	24	
		Others	21	

* Percentage of 59.2% who had definitely decided on style.

** Percentages corrected to include those not answering. (30.8%)

TABLE 2. ARCHITECTURAL STYLE BY REGION

Survey	Sample	Findings				
(2) <u>Behind the Blueprints</u> , Better Homes and Gardens, Meredith Pub. Co., Des Moines, Ia., 1946.	A survey of 4,900 families who definitely plan to build a new home. Questionnaires were mailed and 42% were returned.	<u>Region</u>				
		Cape Cod	New England Colonial	Contemporary	Ranch House	Southern Colonial
		53%	14%			
		41	13			
		30				
		35	10	11%	23%	
		35		15		14%
		36		14	13	
		17		11	29	12
		27		24	22	
(27) <u>The New House Next Door</u> , Better Homes and Gardens, Des Moines, Ia., 1950.	1,960 questionnaires were mailed to families building new homes and 1,418 were returned (72%).	<u>Region</u>				
		Cape Cod	New England Colonial	Contemporary	Ranch House	Others
		51%	13%	44%	15%	17%
		34	22	13	13	18
		22	14	17	24	23
		33	8	13	28	18
		25	10	15	20	30
		41	7	9	19	24
		15	8	30	29	18
		7	4	34	31	24
		27	10	18	24	21

NUMBER OF STORIES

Story Preference--Analysis

There is no consistent trend regarding preference for the 1-story house; however, the 1-story house is preferred by six-tenths of the surveyees. The demand for the 1½-story house has remained fairly steady, but the 2-story house has become less popular. (See Chart II and Table 3.)

The traditional 2-story house is most often desired in the New England States. The 1-story house gains in popularity as one travels westward, as is evidenced by a 1945 magazine survey (No. 24). This study indicated that in the New England areas, 32.6 per cent wanted 1-story and 66.3 per cent wanted 2-story houses; whereas, in the Mountain and Pacific areas, 66 per cent wanted one story and 32 per cent wanted two stories. Supportive evidence that preferences vary according to region is furnished by another magazine survey (No. 27). This study showed that in New England, 28 per cent wanted one story and 20 per cent wanted two stories; in the Mountain and Pacific areas, 81 per cent wanted one story and 7 per cent wanted two stories.

Comments and Evaluation

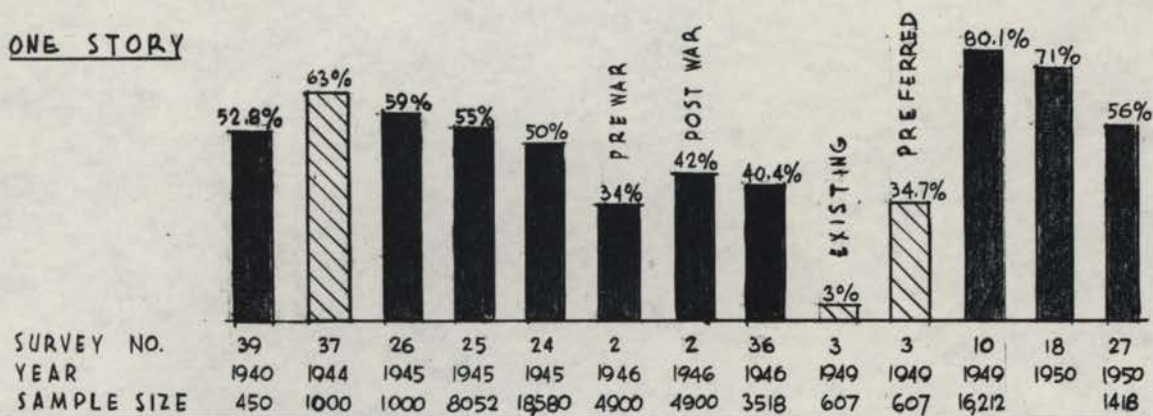
The number of stories desired in a house is related to the style of architecture preferred.

In spite of the fact that only six-tenths of the surveyees want 1-story houses, a recent survey indicated that nine-tenths of the houses built in the first part of 1950 were 1-story homes.¹

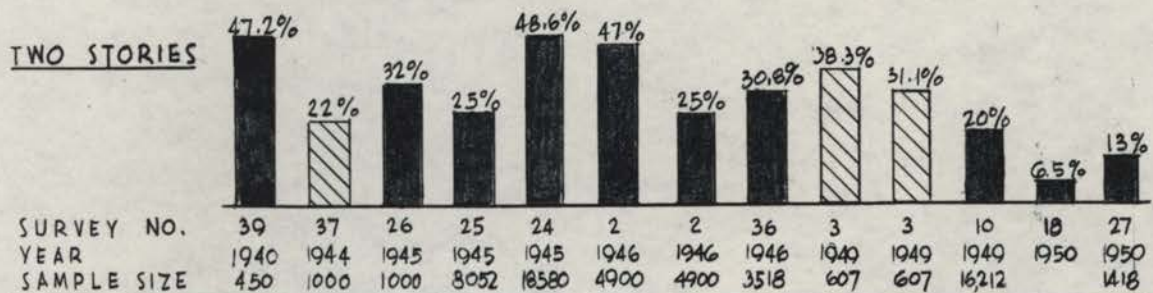
The size of the lot often determines the number of stories. For example, a small lot frequently commits a home-builder to a 1½- or 2-story house, regardless of preference. This is particularly true in large cities where, in some neighborhoods, only small lots are available.

¹According to an HHFA release, "Almost nine-tenths of the single-family detached houses built in the United States during the first half of 1950 were 1-story homes." This statement is based on a survey of 5,530 families who built new single-family detached houses in the first six months of 1950 under the mortgage insurance provision of the Federal Housing Administration. Surveying Materials Used in House Construction, Housing and Home Finance Agency news release, Washington 25, D. C., July 18, 1951. Unpaged. Results of this survey were released too late to be included in the general analysis of the housing surveys.

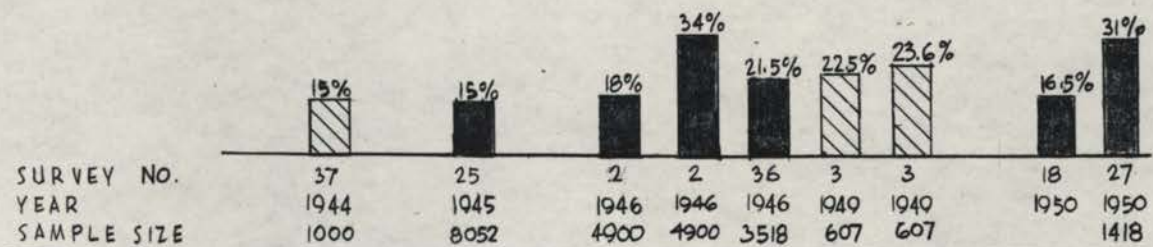
ONE STORY



TWO STORIES



1 1/2 STORIES



RURAL SURVEYS



GENERAL SURVEYS

CHART II
NUMBER OF STORIES WANTED

TABLE 3. NUMBER OF STORIES

Survey	Sample	Findings	
(39) <u>Wilson, M., and Wells, L.,</u> <u>House Planning Ideas of</u> <u>Oregon Rural Women, 1940.</u>	A survey of 450 Oregon homemakers, 60% lived on farms and the rest in villages and suburban areas. No measurement was made of those planning to build or buy.	<u>Story</u>	<u>Percent</u>
		1 (basement)	43.1
		1 (no basement)	9.7
		2 (basement)	37.7
		2 (no basement)	9.5
(37) <u>What a Thousand Farm</u> <u>Families are Going to</u> <u>do About Building,</u> <u>Successful Farming, 1944.</u>	A survey of readers of <u>Successful Farming</u> . 1,000 families planning to build or remodel answered a mail questionnaire.	<u>Story</u>	<u>Percent</u>
		1	63
		1½	15
		2	22
(26) <u>The Livability Problems</u> <u>of 1,000 Families,</u> <u>National Housing Agency,</u> <u>Federal Public Housing</u> <u>Authority, 1945, Bulletin</u> <u>No. 28.</u>	A survey of 1,062 families living in low-cost public housing. This was a schedule-interview type of survey. Project managers were also interviewed. No measurement was made of those planning to build or buy new homes.	<u>Story</u>	<u>Percent</u>
		1	59
		2	32
		1st floor of 2 story house	5
		2nd floor of 2 story house	3
		Apartment (in 3 or more story buildings)	1
(25) <u>The Forum Study of the</u> <u>House Market, Crossley</u> <u>Inc., Architectural Forum,</u> <u>1945.</u>	A survey of 8,052 families who plan to build new homes.	<u>Story</u>	<u>Percent</u>
		1	55
		1½	15
		2	25

TABLE 3. NUMBER OF STORIES (Contd.)

Survey	Sample	Findings				
(24) <u>The American Woman's Home of Tomorrow, Part I, Architectural Preferences</u> , McCall Corp., New York, N. Y., 1945.	A survey of 18,580 McCall's subscriber families. 3/4 of this group will build or buy new homes.	One Story	Two Story			
		32.6%	66.3%	New England		
		39.8	59.1	Middle Atlantic		
		49.6	48.9	East North Central		
		57.0	42.1	West North Central		
		45.9	52.5	South Atlantic		
		48.9	49.5	East South Central		
		60.9	38.3	West South Central		
		66.2	32.1	Mountain		
		65.8	32.9	Pacific		
		50.6	48.8	Military Camps		
		50.0	48.6	Total U. S.		
		40.3	58.9	Canada		
		56.2	42.5	Outside U.S.A.		
(2) <u>Behind the Blueprints, Better Homes and Gardens</u> , Meredith Pub. Co., Des Moines, Ia., 1946.	A survey of 4,900 families who definitely plan to build a new home. Questionnaires were mailed and 42% were returned.	Story	Prewar Home	Postwar Home		
		1	34%	42%		
		1½	18	34		
		2	47	25		
(36) <u>What Kind of Homes do Families with Children Want</u> , Parents' Magazine Home Building Study, 1946.	A survey of readers (with children) of Parents' Magazine. 3,653 families answered a questionnaire (mail) (26.5% returns). 71.4% of this group plan to build or buy homes.	Story	Build	Buy	Remodel	Total
		1	44.2%	40.0%	24.5%	40.4%
		1½	22.7	20.9	16.9	21.5
		2	27.8	36.8	40.7	30.8
		or more				

TABLE 3. NUMBER OF STORIES (Contd.)

Survey	Sample	Findings		
(3) <u>Beyer, Glen, Farm Housing in the Northeast</u> , Cornell Univ. Press, Ithaca, New York, 1949.	A survey of 607 farm families in the northeast. The interview-schedule method was employed. No measurement was made of those planning to build or buy a new house.	<u>Story</u> 1 1½ 2 2½ 3	<u>Existing</u> 3.2% 22.5 38.3 31.5 4.5	<u>Preferred</u> 34.7% 23.6 31.1 0.0 0.5
(10) <u>Collier's Housing Quiz</u> , Colliers, Jan. 1949.	A survey of 16,212 readers of the <u>Collier's Magazine</u> . No mention was made of the percentages planning to build or buy.	<u>Story</u> 1 2 Over 2		<u>Percent</u> 80.1 20.0 0.5
(18) "Public's Blueprint of Kind of Home It Wants," <u>Practical Builder</u> , Oct. 1950.	Thousands of questionnaires were mailed but no mention was made as to the exact number. 96.5% plan to build, 2.5% plan to buy, and 2.5% plan to remodel. 51% are going to build in 6 months, 12% in 7 months to a year, 20% in 1-5 years, and 5% in 3-5 years.	<u>Story</u> 1 1½ 2 Tri-level house		<u>Percent</u> 71.0 16.5 6.5 3.0
(27) <u>The New House Next Door</u> , Better Homes and Gardens, Des Moines, Ia., 1950.	1,960 questionnaires were mailed to families building new homes, and 1,418 were returned (72%).			<u>Stories</u> <u>One & a-half</u> <u>Two</u> New England 28% 52% 20% Middle Atlantic 24 47 29 South Atlantic 62 22 16 East North Central 53 36 11 East West Central 67 25 8 West North Central 43 47 10 West South Central 83 6 11 Mtn. and Pacific 81 12 7 Total U. S. 96 31 13

SIZE AND ARRANGEMENT OF THE HOUSE

Size Preference--Analysis

The six-room house is preferred by the largest group of surveyees. The five-room house is second in popularity. The seven-room house is third. Houses with eight or more rooms, and houses with four or less rooms, are about equal in popularity and rank fourth. (See Chart III and Table 4.) Four-tenths of the surveyees want houses with six rooms; three-tenths, five rooms; two-tenths, seven rooms; and one-tenth, eight or more rooms, or four or less rooms.

One study (No. 2) indicated that there was, as might be expected, a direct relationship between the size of the house preferred, and the economic level of a family. (See Table 5.)

While there is undoubtedly a relationship between the size of the family and the size of the house desired, none of the surveys measured this. One (No. 36), covering 3,518 families with children, indicated this inasmuch as its findings showed a preference for larger houses than did the "average" demand.

Comments and Evaluation

Despite the fact that the largest number of families prefer the six-room house, a recent pre-publication report of a national survey by the Housing and Home Finance Agency indicates that people are not building or buying houses of this size. Economic considerations probably account for the fact that people purchase smaller houses than they desire.

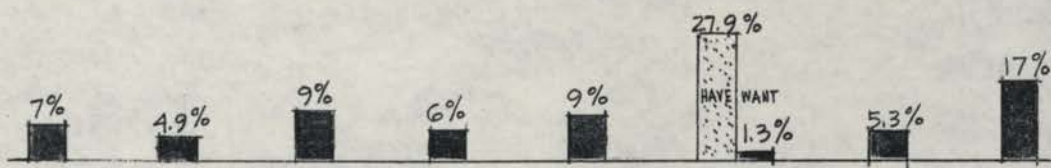
"During the first half of 1950," the report stated, "just about half of all single-family dwellings built in the United States contained four rooms, not counting bath. Virtually all the rest had either five or six rooms, with five-room houses outnumbering six-room dwellings substantially... This represents a considerable shift in the past decade: In 1940, about 22 per cent of new single detached houses were four-room structures, while five-room residences accounted for nearly half of the total built."¹

¹Surveying Materials Used in House Construction, Housing and Home Finance Agency news release, Washington 25, D. C., July 18, 1951. Unpaged.

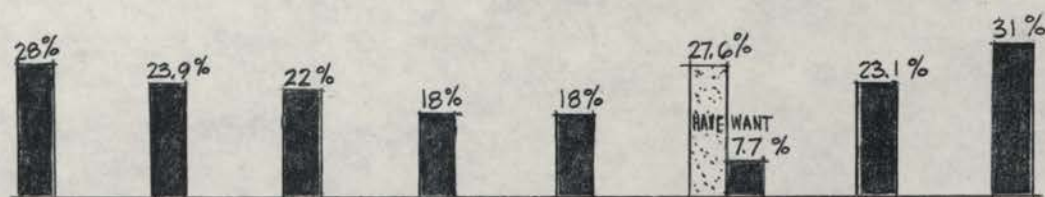
SURVEY NO. →	25	29	9	15	16	36	10	27
YEAR →	1945	1946	1946	1946	1946	1946	1949	1950
SAMPLE SIZE →	8052	4007	1837	1935	1970	3518	16212	1418

NUMBER OF ROOMS
WANTED ↓

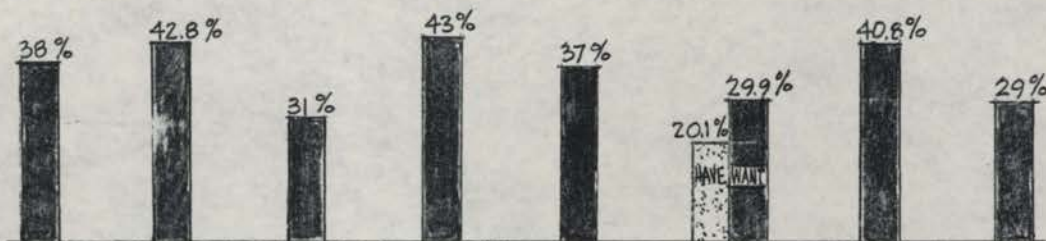
FOUR ROOMS
OR LESS



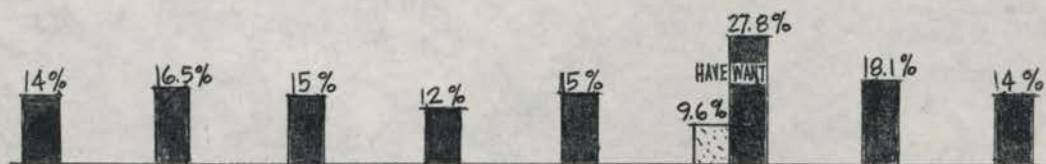
FIVE ROOMS



SIX ROOMS



SEVEN ROOMS



EIGHT ROOMS
OR MORE

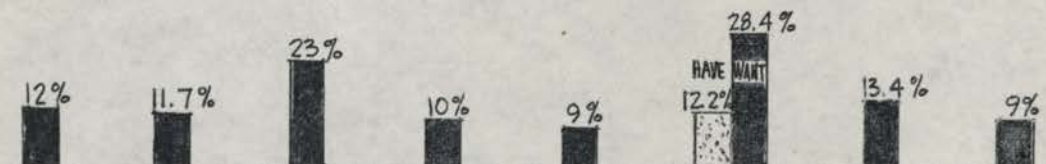


CHART III.
SIZE OF HOUSE WANTED

TABLE 4. SIZE OF THE HOUSE

Survey	Sample	Findings	
(37) <u>What a Thousand Farm Families are going to do About Building, Successful Farming, Sept. 1944.</u>	A survey of readers of <u>Successful Farming</u> . 1,000 families planning to build or remodel answered a mail questionnaire.	Rooms	Present Home
		Kitchen	99.8%
		1 Bedroom	11.4
		2 Bedrooms	26.1
		3 Bedrooms	29.1
		4 or more bedrooms	29.9
		1 Bathroom	25.9
		2 or more bathrooms	1.5
		Living-room	81.1
		Dining-room	53.0
		Utility or workroom	17.2
		Recreation room	2.5
		Living-dining room	14.7
		Library or office	2.5
		Sewing room	0.7
		Store room	2.7
		Postwar Home	99.0%
(25) <u>The Forum Study of the House Market, Crossley Inc. Architectural Forum, Sept. 1945.</u>	A survey of 8,052 families who plan to build new homes (non-farm families).	Rooms	Percent
		3 or less	2
		4	5
		5	28
		6	38
		7	14
		8	12
		Don't know	2

TABLE 4. SIZE OF THE HOUSE (Contd.)

Survey	Sample	Findings	
(29) <u>Urban Housing Survey</u> , <u>Saturday Evening Post</u> , Research Dept., Curtis Pub. Co., Nov. 1946.	A survey of 4,007 families in 35 states and 118 urban centers were interviewed. 55 to 60% of the interviews were with renters and 40 to 45% were with the home owners. 34.3% of the whole group expect to build or buy a house.	<u>Rooms</u>	<u>Percent</u>
		4 or less	4.9
		5	23.9
		6	42.8
		7	16.5
		8	7.6
(9) <u>Collier's Families Re-</u> <u>port Their Housing Plans</u> <u>for Tomorrow</u> , Crowell- Collier Research Project, June 1946.	A questionnaire was mailed to 3,000 representative <u>Collier</u> reader fami- lies. 1,837 families (61%) answered the questionnaire. 16% of this group will build and 10% will buy a new home.	9 or more	4.1
		<u>Rooms</u>	<u>Percent</u>
		3	2
		4	7
		5	22
		6	31
		7	15
		8	9
		9 or more	3
		Undecided	11

TABLE 4. SIZE OF THE HOUSE (Contd.)

Survey	Sample	Findings			
(15) <u>Houses</u> , Woman's Home Companion, Crowell-Collier Pub. Co., New York, N. Y., May 1946.	A survey of <u>Woman's Home Companion</u> subscribers. 1,935 answered a mail questionnaire (65% returns). 16% will build and 9% will buy a new house in the next two years.	Size of future homes of buyers:			
		<u>Rooms</u>			<u>Percent</u>
		3			1
		4			5
		5			18
		6			43
		7			12
		8 and over			20
		Size of present and future homes of future renters:			
		<u>Rooms</u>	<u>Present Home</u>		<u>Future Home</u>
(16) <u>Housing Plans of Families</u> , Crowell-Collier Pub. Co., New York, N. Y., June 1946.	A survey of readers of <u>The American Magazine</u> . 1,970 answered a mail questionnaire (66% returns). 27% of this group intend to buy or build new homes.	3	21%		5%
		4	26		16
		5	22		29
		6	19		24
		7	6		5
		8 and over	5		5
		<u>Rooms</u>	<u>All New Homes</u>	<u>Future Builders</u>	<u>Future Buyers</u>
		4 or less	9%	10%	8%
		5	18	15	24
		6	37	33	41
		7	15	16	12
		8	6	7	5
		9 or more	3	4	1
		Don't know	12	13	9

TABLE 4. SIZE OF THE HOUSE (Contd.)

Survey	Sample	Findings		
(36) <u>What Kind of Homes do Families with Children Want?</u> Parents' Magazine Home Building Study, 1946.	A survey of readers (with children) of <u>Parents' Magazine</u> . 3,653 families answered the mail questionnaire (26.5% returns). 71.4% plan to build or buy a new home.	<u>Rooms</u>	<u>Have</u>	<u>Want</u>
		3 or less	10.7%	0.1%
		4	17.2	1.2
		5	27.6	7.7
		6	20.1	29.9
		7	9.6	27.8
		8	5.9	18.9
		9 or more	6.3	9.5
(3) <u>Beyer, Glenn, Farm Housing in the Northeast</u> , Cornell Univ. Press, Ithaca, New York, 1949.	A survey of 607 farm families in the Northeast. The interview-schedule method was used. No measurement was made of those planning to build or buy new homes.	Average No. of Rooms in Present Houses		
		7.6	By Region	
		7.1	Central area	
		7.0	Cold North	
		6.7	Appalachian area	
			Coastal area	
(10) <u>Collier's Housing Quiz</u> , Colliers, June 1949.	A survey of 16,212 readers of <u>Collier's Magazine</u> . No mention was made of the percentages planning to build or buy.	<u>Rooms</u>	<u>Percent</u>	
		4 or less	5.3	
		5	23.1	
		6	40.8	
		7	18.1	
		8 or more	13.4	
(27) <u>The New House Next Door</u> , Better Homes and Gardens, Des Moines, Ia., 1950.	1,960 questionnaires were mailed to families building new homes and 1,418 were returned (72%).	<u>Rooms</u>	<u>Percent</u>	
		4 or less	17	
		5	31	
		6	29	
		7	14	
		8 or more	9	

TABLE 5. ROOMS BY MONEY TO BE SPENT ON THE HOME

Survey	Sample	Findings	
(2) <u>Behind the Blueprints.</u> Better Homes and Gardens, Meredith Pub. Co., Des Moines, Ia., 1946.	A survey of 4,900 families who definitely plan to build a new home. Questionnaires were mailed and 42% were returned.	<u>Price</u>	<u>Rooms</u>
		Under \$5,000	5.5
		\$5,000 to \$7,500	5.9
		\$7,500 to 10,000	6.5
		\$10,000 to 15,000	7.0
		\$15,000 and over	7.6
		All Homes	6.4

House Arrangement Preference--Analysis

Wilson and Wells in a study of Oregon families measured preferences for various room arrangements. (See Table 6 presenting data from Survey 39.) It is interesting to note what was considered the choice arrangement in both the four-room and the five-room house.

In the four-room house (two bedrooms), the kitchen-dining combination was favored by a very small margin over the living-dining combination. Only 3 per cent of the group considered a kitchen-living-dining combination and three bedrooms the best arrangement.

In the five-room house, the fifth room was designated as the dining room by 36.5 per cent of the surveyees; 34.9 per cent chose the combination living-dining room, kitchen and three bedrooms. The kitchen-dining room combination was not as popular as it was in the four-room house.

TABLE 6. PREFERENCES OF HOMEMAKERS REGARDING ARRANGEMENT OF DWELLINGS.

Four-room Dwelling	F A R M		O T H E R		A L L	
	Best	Poorest	Best	Poorest	Best	Poorest
Kitchen-dining room combined; living-room (used as bedroom when needed); two bedrooms.	50.4%	2.7%	50.6%	2.9%	50.5%	2.8%
Kitchen-dining-living room combined; three bedrooms.	3.0	92.0	3.8	91.4	3.4	91.7
Kitchen; living-dining room (used as bedroom when needed); two bedrooms.	46.6	5.3	45.6	5.7	46.1	5.5

Five-room Dwelling	F A R M			O T H E R			A L L		
	Best	Next Best	Poorest	Best	Next Best	Poorest	Best	Next Best	Poorest
Kitchen-dining room combined; living room; three bedrooms.	19.4%	27.2%	16.7%	22.1%	23.7%	19.5%	20.6%	25.6%	17.9%
Kitchen, dining-living room combined; three bedrooms.	34.9	30.9	11.0	30.0	34.6	13.5	32.7	32.6	12.1
Kitchen; dining room; living room (used also as a bedroom when needed); two bedrooms.	36.5	28.5	19.2	35.3	21.4	18.2	36.0	25.3	18.8
Kitchen-dining room combined (room may be used either as a bedroom or a dining room); living room; two bedrooms.	9.1	13.4	53.1	12.6	20.3	48.8	10.7	16.5	51.2

GENERAL CONCEPTS IN HOUSE PLANNING

To design the home merely in terms of the recognized room labels--living room, first bedroom, kitchen, etc.--offers no guarantee that the functional needs of the family will be met. The functions themselves must be clearly visualized and provided for in terms of the social group to be housed.¹

According to Field, there are only three basic psychological needs to be provided for in a home: 1) the need for activity, 2) the need for quiet, and 3) the need for privacy.²

The American Public Health Association emphasizes the fact that mental and emotional health are equally as important considerations in housing as physical health. Frustrations resulting from overcrowding, conflict between desires and needs of the various members of the family, and fatigue due to the performance of household duties under unfavorable conditions are equally as serious as unheated rooms and dangerous stairways.³ Riemer emphasizes that inadequate housing often leads many to physical and mental disease, to delinquency, crime, and to both personality and family disorganization.⁴ His study of Swedish living habits⁵ draws attention to the fact that the smaller the size of the apartment, the greater the tendency of adolescents to spend the evenings outside the home.

The American Public Health Association suggests that: "Dwelling space is sufficient only if it accommodates furniture and equipment, activities, circulation and storage, and its true measure of adequacy is the possibility for smooth functioning of family life. Houses designed merely in terms of specific rooms and cubic contents are wholly unsatisfactory."⁶

Blum and Candee indicate that: "There are strong indications of a desire for space as such which shows itself in a rejection of small spaces no matter how efficiently arranged for the function in question. On the other extreme there seems to be a feeling against large unoccupied space, so that there is apparently an optimal range. This problem should be accessible to laboratory study."⁷

¹"Basic Principles of Healthful Housing," Housing for Health, p. 17.

²Field, Dorothy, The Human House, p. 16.

³Planning the Home for Occupancy, American Public Health Association, p. v (Introduction).

⁴Rierner, Svend, "Sociological Theory of Home Adjustment," American Sociological Review, June 1943, p. 278.

⁵Rierner, Svend, "A Research Note on Sociological Home Planning," American Journal of Sociology.

⁶Planning the Home for Occupancy, American Public Health Association, p. 7.

⁷Blum, Milton and Candee, Beatrice, Family Behavior, Attitudes, and Possessions, John B. Pierce Foundation, Research Study 5, p. 148.

IV. ROOMS

SEPARATE LIVING ROOM

Preference for Separate Living Room--Analysis

Approximately seven-tenths of the surveyees want a separate living room (as distinguished from the living-dining or living-kitchen combination). This fact was measured directly by certain surveys; it may be inferred from others which measured the demand for combination living-dining rooms. (See Chart IV, p. 27; Table 7, p. 28; and Table 15, pp. 51-53.)

One survey (No. 37) revealed a decrease in popularity of the living room and a corresponding increase in popularity of the combination living-dining room. (See Table 14, pp. 46-47.)

Survey 27 showed that the demand for a separate living room was not much greater in the expensive house than in low- and moderate-cost houses. Apparently building costs were not a determining factor in this survey.

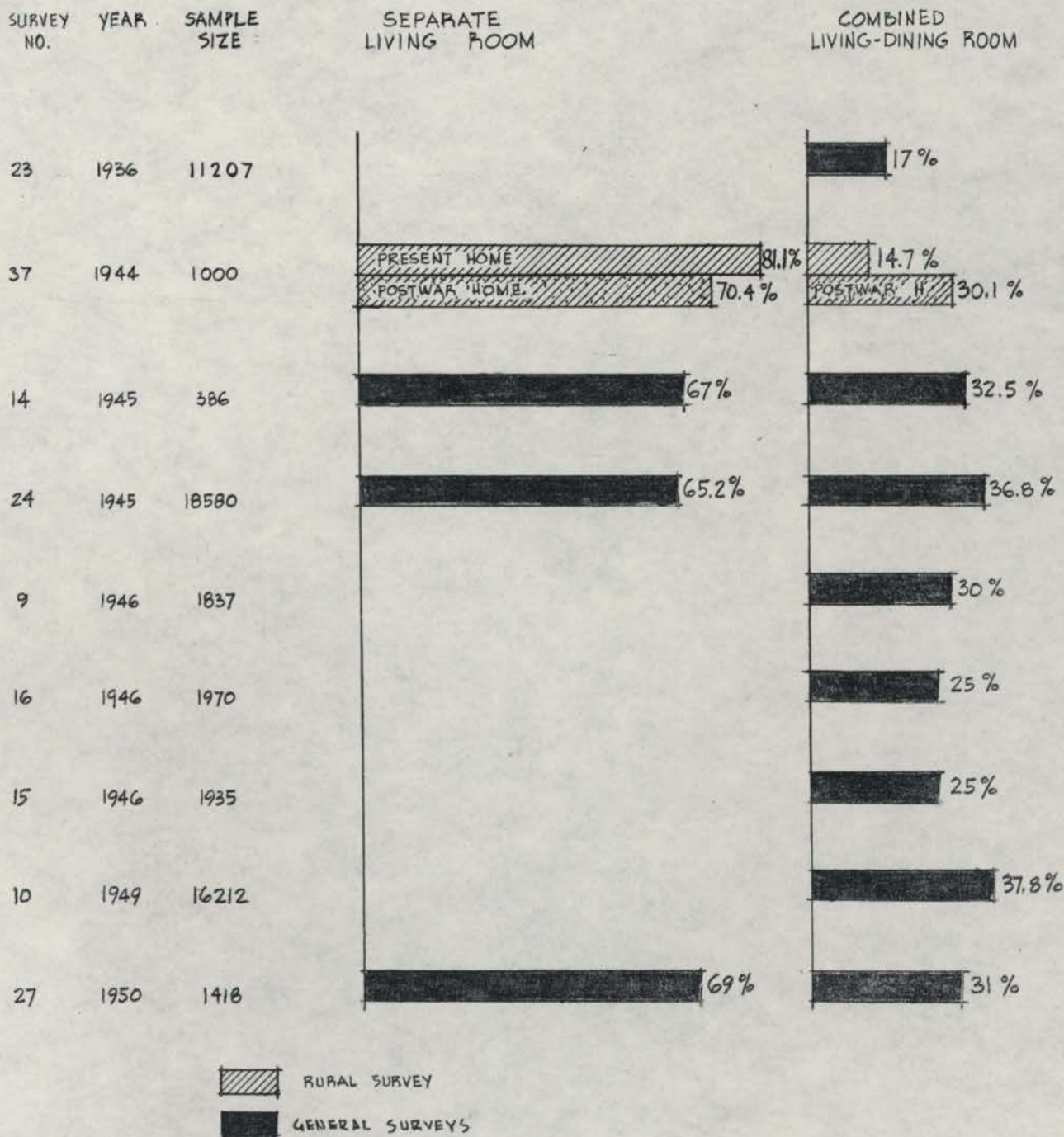


CHART IV.
DEMAND FOR A SEPARATE LIVING ROOM AND A COMBINED LIVING-DINING ROOM

TABLE 7. DEMAND FOR A SEPARATE LIVING ROOM

Survey	Sample	Findings	
		Present Home	Postwar Home
(37) <u>What a Thousand Farm Families are Going to do About Building, Successful Farming, 1944.</u>	A survey of readers of <u>Successful Farming</u> , 1000 families planning to build or remodel answered a mail questionnaire.	Living room 81.1%	70.4%
(14) <u>Home Owner's Survey, Better Homes and Gardens Research Div., Meredith Pub. Co., Des Moines, Ia., 1945.</u>	A survey of 386 <u>Better Homes and Gardens</u> subscriber families who plan to build, buy, or remodel (7.72% returns).	Living room planned	67%
(24) <u>The American Woman's Home of Tomorrow, Part III, The New House, McCall Corp., New York, N. Y., 1945.</u>	A survey of 18,580 <u>McCall's</u> subscriber families. 79.5% plan to build or buy a new house.	Living room planned	65.2%
(27) <u>The New House Next Door, Better Homes and Gardens, Des Moines, Ia., 1950.</u>	1960 questionnaires were mailed to families who plan to build new homes. 1416 questionnaires were returned (72%)	Living room by cost of house:	
		under \$7,500	63%
		7,500- 9,999	63
		10,000- 14,999	67
		15,000- 19,999	68
		20,000 and over	66

Use of the Living Room--Analysis

A public-housing survey (No. 26) indicated that the majority of families used the living room daily. The radio increased its use; new furniture decreased it, but only temporarily. Specific use of the living room was also determined in this survey. (See Table 8.) "Entertaining is done in both living rooms and kitchens, but few families report the use of the living rooms for guest dining." This survey suggested that the living room should no longer be planned for dining. In addition, this survey showed that the living room was used chiefly for children's recreation, children's study, and sewing.

A magazine survey (No. 2) indicated still other uses. It reported that the living room was used much less for children's play and study, and more for family relaxation and social activities.

One reason for the difference in the way the living room was used lies in the difference in family characteristics of the two samples. Eighty per cent of the families in the public-housing survey (No. 26) had children; more than 50 per cent of the children were under four years of age, and the rest of the children (about 50 per cent) were of school age.¹ On the other hand, only about half of the families in the magazine survey (No. 2) had children. Families living in public-housing² units were often overcrowded because of the unavailability of larger units and, for some activities, there was simply no alternate room.

Regarding the survey concerned with rural areas (No. 3), it will be noted that two to three times as many families used the living room for ironing and sewing as wished to use it for this purpose.

¹Livability Problems of 1,000 Families, NHA, FPFA, 1945, p. 3.

²Ibid., p. 3.

TABLE 8. USE OF THE LIVING ROOM

Survey	Sample	Findings				
(26) <u>The Livability Problems of 1000 Families</u> , National Housing Agency, FPHA, 1945, Bulletin No. 28.	A survey of 1,062 families living in low-cost public housing. This was a schedule-interview type of survey. Project managers were also interviewed. No measurement was made of those planning to build or buy new homes.		Daily	Occasion-ally	Usually	
		Dining	3%	5%	-%	
		Sleeping	7	11	-	
		Sewing	-	-	38	
		Ironing	8	-	-	
		Children's recre-ation (families with children)	-	-	80	
		Children's study (families with children)	-	-	38	
(2) <u>Behind the Blueprints</u> , Better Homes and Gardens, Meredith Pub. Co., Des Moines, Ia., 1946.	A survey of 4,900 families who definitely plan to build a new home. Questionnaires were mailed and 42% were returned.		Usually Used	Sometimes Used		
		Family relaxation	63%	12%		
		Entertaining guests	82	12		
		Card playing	59	13		
		Serving refreshments	50	15		
		Children's play	14	9		
		Children's study	17	10		
(3) <u>Bevers, Glenn, Farm Housing in the Northeast</u> , Cornell Univ. Press, Ithaca, New York, 1949.	A survey of 607 farm families in the Northeast. The inter-view-schedule method was employed. No measurement was made of those planning to build or buy new homes.		Families Now Using This Location	Families Wanting To Use This Location		
			Summer	Winter	Summer	Winter
		Ironing	3.9%	4.6%	1.5%	1.6%
		Sewing	(all times)	20.8	(all times)	8.7

Size Preference for Living Room—Analysis

The surveys, in general, show that relatively large living rooms are in demand. (See Chart V and Table 9.) Surveys 9, 15 and 16 indicated that a large majority of the people wanted the living room 12' x 18' or larger.

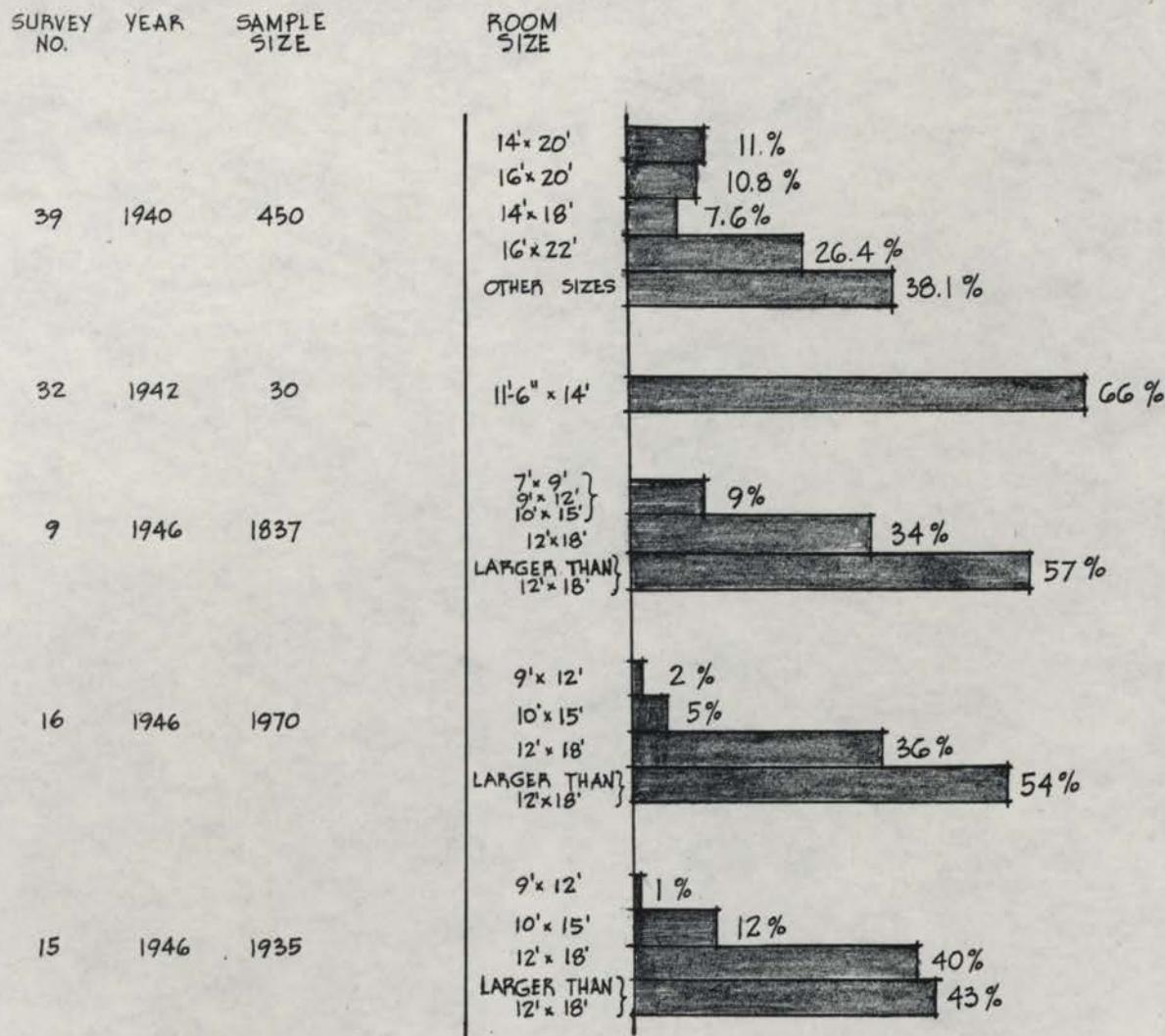


CHART V
PREFERRED LIVING ROOM SIZE

An exception to the demand for a large living room is to be found in a public-housing survey (No. 32). Here again, however, one must keep in mind that families in public housing represent a select group.

A survey of apartment dwellers (No. 1) stressed the need for larger living rooms: "All tenants reporting wanted larger living rooms, 16' x 24' being the usual request, with plenty of wall space and good window arrangement."¹

¹Amos, Thrysa, "What Tenants Want in Housing," Architectural Record, August, 1938, p. 64.

TABLE 9. LIVING ROOM SIZE

Survey	Sample	Findings	
(1) Amos, Thyra W., What Tenants Want in Housing, <u>Architectural Record</u> , pp. 63-65, Aug. 1938.	A survey of 70 families living in apartments in New York City. No mention was made of those planning to build or buy.	"Size usually requested" 16' x 24'	
(39) Wilson, M. and Wells, L., <u>House Planning Ideas of Oregon Rural Women</u> . 1940.	A survey of 450 Oregon homemakers. 60% lived on farms and the rest in villages and suburban areas. No measurement was made of those planning to build or buy.	% of Whole Group	
		% Wanting to Combine Living & Dining room	
		<u>Size Wanted</u>	
		14' x 20'	11.0
		16' x 20'	10.8
		14' x 18'	7.6
		16' x 24'	6.3
		16' x 18'	5.1
		15' x 20'	4.6
		18' x 24'	4.1
		12' x 18'	3.6
		14' x 24'	2.4
		15' x 18'	2.4
		12' x 15'	2.2
		12' x 16'	2.0
		14' x 22'	2.0
		18' x 20'	2.0
		12' x 20'	1.7
		15' x 24'	1.7
		16' x 22'	26.4
(32) Wayman, Leonard, "The Public Tenant Speaks," <u>Architectural Forum</u> , pp. 217-222, April 1942.	30 families living in public housing projects in 8 northern cities were interviewed. No measurement was made of those planning to build or buy.	<u>Size Wanted</u>	<u>Percent</u>
		11' - 6" x 14'	66

TABLE 9. LIVING ROOM SIZE (Contd.)

Survey	Sample	Findings	
(25) <u>The Forum Study of the House Market</u> , Crossley Inc., Architectural Forum, 1945.	A survey of 8,052 families who plan to build new homes.	"Large living rooms"	8%
(9) <u>Collier's Families Report Their Housing Plans for Tomorrow</u> , Crowell-Collier Research Project, 1946.	A questionnaire was mailed to 3,000 representative Collier reader families. 1,837 families (61%) answered. 16% of this group will build and 10% will buy a new home.	<u>Size Wanted</u> Larger than 12' x 18' 12' x 18' 7' x 9' 9' x 12' 10' x 15'	<u>Percent</u> 57 34 9
(16) <u>Housing Plans of Families</u> , The American Magazine, Crowell-Collier Pub. Co., New York, N. Y., 1946.	A survey of readers of the <u>American Magazine</u> . 1,970 answered a mail questionnaire (66% returns). 27% of this group intend to buy or build a new home.	<u>Size Wanted</u> 9' x 12' 10' x 15' 12' x 18' Larger Don't know	<u>Percent</u> 2 5 36 54 3
(15) <u>Houses</u> , Woman's Home Companion, Crowell-Collier Pub. Co., New York, N.Y. 1946.	A survey of <u>Woman's Home Companion</u> subscribers. 1,935 answered a mail questionnaire (65% returns). 16% will build and 9% will buy a house in the next two years.	<u>Size Wanted</u> No answer 9' x 12' 10' x 15' 12' x 18' Larger	<u>Percent</u> 4 1 12 40 43

General Likes and Dislikes (Living Room)

A magazine survey (No. 35) determined likes and dislikes concerning the living room (Table 10).

TABLE 10. LIVING-ROOM FEATURES LIKED AND DISLIKED

I like my present living room because:		I do not like my present living room because:	
It is big enough.	54.5%	It is too small.	36.9%
It has enough windows.	60.0	Not enough windows.	28.5
The furniture fits well.	51.3	The furniture doesn't fit.	29.8
It is comfortable.	72.6	It is uncomfortable.	11.7
Easy place to entertain.	51.8	Hard place to entertain.	32.2
Easy place to clean.	62.3	Hard place to clean.	22.3
Color scheme is attractive.	61.5	Color scheme is ugly.	18.1
Everything is new.	16.3	Everything is old.	27.4
It has good old furniture.	41.5	Everything is shabby.	13.8

Most frequently mentioned among "likes" were: adequate size, enough windows, comfort, and color scheme. As to dislikes, "It is too small", was mentioned most frequently; however, the range of the percentages between the items disliked is too narrow to permit one to arrive at any conclusions.

According to a public-housing survey (No. 26), families needed and wanted most in living-room arrangements, the following:

1. Sufficient wall space for furniture, with locations free from drafts and objectionable views of kitchen equipment.
2. Closed living-room closets.
3. Stairways in two-story houses located so that the bath can be reached without passing through the entire living room.
4. Front doors located so that kitchens cannot be viewed if there is a partial partition between kitchens and living rooms.¹

¹Livability Problems of 1,000 Families, NHA, FPHA, p. 19.

As a result of a public-housing survey (No. 8), one investigator emphasized that living rooms were little used as such in homes of low-income families and, therefore, they should be designed to serve the following purposes:

1. Reception room (kept neat for callers).
2. Bedroom—
To be used frequently as a regular sleeping place for child or adult, or
To be used occasionally for a child with illness or symptoms.
3. Occasionally as a dining room, but not as the only dining space.

Another public-housing survey (No. 26) recommended the size of the living rooms be varied according to the size of the dwelling unit. (See Table 11.) It was emphasized that living rooms 10'-6" to 11' are too narrow and that only ingenious arrangement of the furniture will make a room of this size livable.¹

Comments and Evaluation

The recommendation in the public-housing survey which suggested designing the living room as an alternate-use room, is to be questioned in view of a survey which measured living-room use (No. 26, Table 8 on page 30) and indicated that the living room was used quite extensively by families living in public-housing units. The living room should not, therefore, be designed primarily as an alternate or occasional use room, even for this group.

Surveys indicate a demand for large living rooms. Just how large should a living room be in relation to family size and socio-economic class? A precise answer to this question lies beyond the scope of this preliminary study. Approximate size requirements can be determined from a study,² which lists preferred living-room furniture. Approximate preferences in terms of percentage as listed were:

Sofas	89.2%
Pianos	68.6
Love-seats	50.7
Flat-top desk	47.0
Breakfront bookcases	34.1
Secretary	28.1
Built-in bookcases	23.5
Game and bridge group	12.8
Studio couches	6.1

¹The Livability Problems of 1,000 Families, NHA, FPHA, p. 20.

²Approximate percentages were determined from surveys and competitions conducted by McCall's magazine and on the basis of a consumer investigation made by the National Piano Manufacturers' Association in 1938. Gillies, Mary Davis, "Furniture—Group Units as a Basis for Planning", Architectural Record, April 1939, pp. 92-105. Size of sample not given.

Traffic tolerances in the living room are very important considerations since this room is normally the focal point of the house. A traffic lane 3'-4" wide between the main entrance and the major seating group is considered adequate, but 4'-6" is preferable. Since a wide variety of furniture groupings are possible, even when one holds the number of pieces of furniture constant, no attempt will be made to suggest minimum or maximum living-room sizes at this stage of the project.¹ Thirty-six possible furniture arrangements are presented by Gillies,² with the size of the living room varying from 13'-2" x 16'-5" to 15'-2" x 29'-8".

Living-room sizes recommended in the public-housing survey (No. 26, Table 11) are, for the most part, minimum requirements since they permit little flexibility of furniture arrangement.

Television, according to one writer,³ may have a large influence on the design of the living room in the near future. The fireplace may be replaced by the television set and rooms may have to be elongated to avoid waste space on either side since vision is not good if one sits at an angle of less than 30° from the screen. The location of windows will be another consideration inasmuch as glare interferes with the reception. Furniture groupings will be theater style. Since television is relatively new, the effect of it on living-room design is still an open question.

¹ Contemporary Houses Developed From Room Units, Small Homes Council, 1951, pp. 10-11.

² Gillies, op. cit., pp. 94-100.

³ "Television --- Its Hypnotic Screen Will Change our Approach to Designing Living Rooms and Making Love", Architectural Forum, September 1948, p. 118.

TABLE 11. RECOMMENDED LIVING ROOM SIZE

Survey	Sample	Findings																						
(26) <u>The Livability Problems of 1,000 Families</u> . NHA. FPHA, 1945.	A survey of 1,062 families living in low-cost public housing. This was a schedule-interview type of survey. Project managers were also interviewed. No measurement was made of those planning to build or buy new homes.	<p>Space Needs According to:</p> <table><tr><th>Rooms</th><th>Living Room Square Feet Area</th></tr><tr><td>3 - 3½</td><td>138 - 197</td></tr><tr><td>4 - 4½</td><td>142 - 199</td></tr><tr><td>5 - 5½</td><td>147 - 203</td></tr><tr><td>6 - 6½</td><td>150 - 236</td></tr></table> <p>Space Needs According to:</p> <table><tr><th>Family Size</th><th>Living Room Square Feet Area</th></tr><tr><td>Less than 4</td><td>154 - 190</td></tr><tr><td>4 or 5</td><td>160 - 190</td></tr><tr><td>6 or 7</td><td>160 - 200</td></tr><tr><td>8 or 9</td><td>180 - 200</td></tr><tr><td>10 or over</td><td>200</td></tr></table>	Rooms	Living Room Square Feet Area	3 - 3½	138 - 197	4 - 4½	142 - 199	5 - 5½	147 - 203	6 - 6½	150 - 236	Family Size	Living Room Square Feet Area	Less than 4	154 - 190	4 or 5	160 - 190	6 or 7	160 - 200	8 or 9	180 - 200	10 or over	200
Rooms	Living Room Square Feet Area																							
3 - 3½	138 - 197																							
4 - 4½	142 - 199																							
5 - 5½	147 - 203																							
6 - 6½	150 - 236																							
Family Size	Living Room Square Feet Area																							
Less than 4	154 - 190																							
4 or 5	160 - 190																							
6 or 7	160 - 200																							
8 or 9	180 - 200																							
10 or over	200																							

SEPARATE DINING ROOM

Separate Dining-Room Preference---Analysis

There is a great deal of controversy over whether or not a house needs a separate dining room. There seems to be a general trend away from houses with dining rooms; however, about six-tenths of the families still want a separate dining room. (See Chart VI and Table 12.)

The demand for a dining room varies widely between population segments. There is a close relationship between the amount to be spent on a home and the desire for a separate dining room. This is shown in Surveys 23, 2 and 27. A majority of the families in these surveys who expected to spend \$15,000 or more on a new home wanted a separate dining room. Even with this group, however, there was a decreasing demand for the dining room. This is shown by a comparison of two surveys (Nos. 2 and 27) made by the same organization at a four-year interval. In this time, the demand for a separate dining room dropped in the highest price-bracket from 85 per cent to 65 per cent. Drops in other price ranges were similar.

An opposite trend is to be noted when considering surveys of rural families and of families with children (Surveys 37 and 36)—that is, more families want dining rooms than have them. A possible reason for the rural groups' wanting dining rooms is that, in general, rural areas are more tied to custom and tradition than are urban areas and, hence, are affected by innovation and culture change more slowly. Moreover, rural families have more children than urban families and, as previously noted, families with children want a dining room more often than families without children. The reason for the popularity of the dining room among families with children may be found, in part, in their both needing and wanting larger houses in general. (See Table 4, pp. 18-21.) The demand for seven- and eight-room houses by this group is two to four times as great as it is for any other survey group.

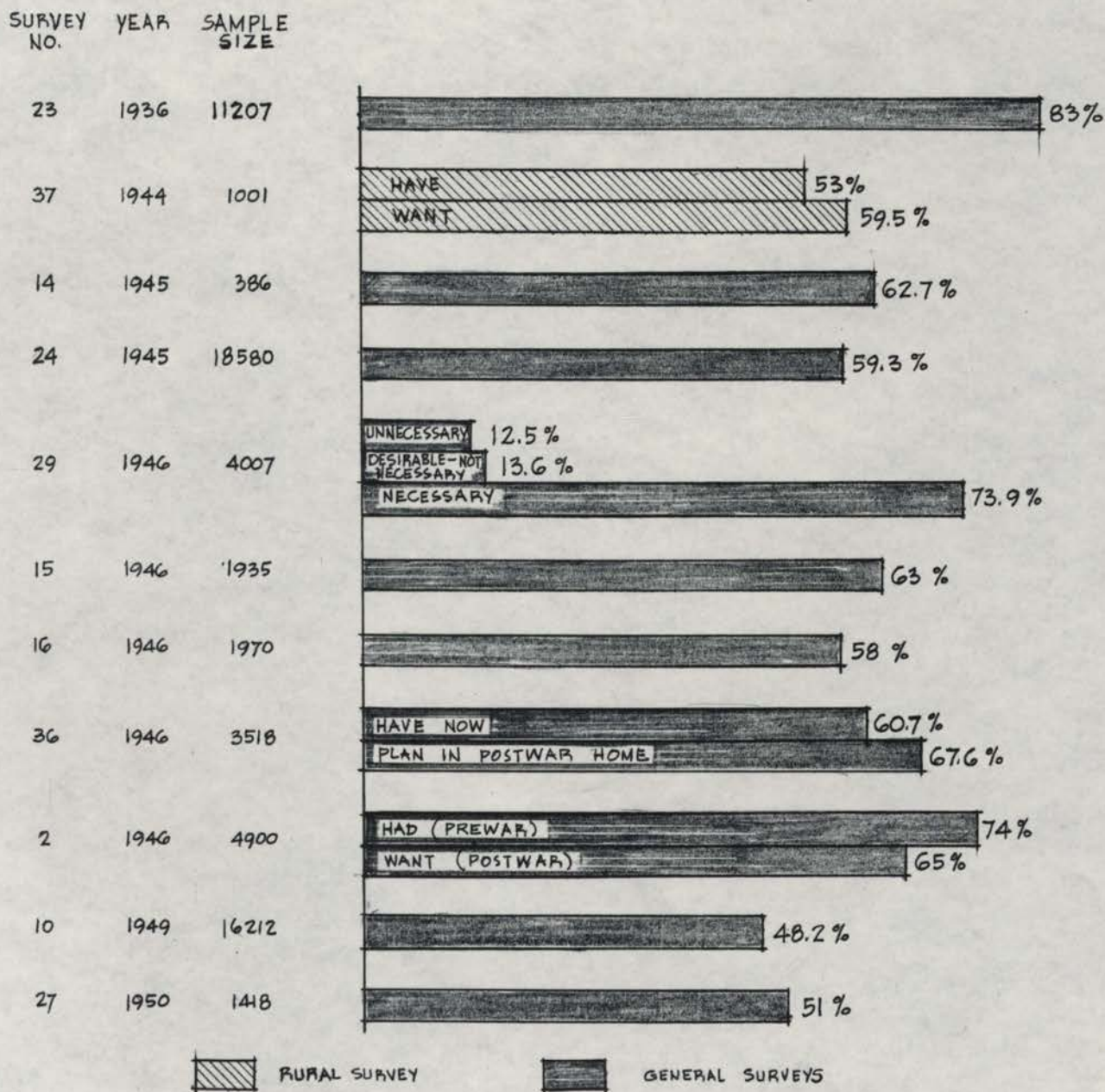


CHART VI
DEMAND FOR SEPARATE DINING ROOM

TABLE 12. DEMAND FOR A DINING ROOM

Survey	Sample	Findings	
(23) "Small House Preview", <u>Architectural Forum</u> , pp. 406-420, Nov. 1936.	A mail survey of 11,207 families determining what people like. 21% may build within the next 2 years.	Separate dining room	83%
		Separate dining room by money spent on home:	Of 83% wanting dining room separate
		Under \$5,000	71.6%
		\$5,000 to \$6,000	78.4
		\$6,000 to \$7,000	81.3
		\$7,000 to \$8,500	83.1
		\$8,500 to \$10,000	87.4
		\$10,000 to \$15,000	92.0
		Above \$15,000	94.0
(37) <u>What a Thousand Farm Families are Going to do About Building, Successful Farming</u> , 1944.	A survey of readers of <u>Successful Farming</u> . 1,000 families planning to build or remodel answered a mail questionnaire.	Separate dining room	Have 53.0% Want 59.5%
(14) <u>Home Owner's Survey</u> , <u>Better Homes and Gardens</u> Research Div., Meredith Pub. Co., Des Moines, Ia., 1945.	A survey of 386 <u>Better Homes and Gardens</u> subscriber families who plan to build, buy, or remodel. 77.2% returns.	Separate Dining Room	Percent
		Build	65.3
		Buy	72.4
		Build or buy	62.7
(24) <u>The American Woman's Home of Tomorrow</u> , Part III, <u>The New House</u> , McCall Corp., New York, N.Y., 1945.	A survey of 18,580 <u>McCall's</u> subscriber families. 79.5% plan to build or buy a new house.	Separate dining room	59.3%

TABLE 12. DEMAND FOR A DINING ROOM (Contd.)

Survey	Sample	Findings		
(29) <u>Urban Housing Survey</u> , Saturday Evening Post Research Department, Curtis Pub. Co., 1946.	4,007 families in 35 states and 118 urban centers were interviewed. 55 to 60% of the interviews were with renters and 40 to 45% were with home owners. 34% expect to build or buy a house.	Dining Room	<u>Necessary</u>	Desirable but not <u>Necessary</u> Not <u>Necessary</u>
			73.9%	13.6% 12.5%
(15) <u>Houses</u> , Woman's Home Companion, Crowell-Collier Pub. Co., New York, N.Y., May 1946.	A survey of <u>Woman's Home Companion</u> readers. 1,935 answered a mail questionnaire (65% returns). 16% will build and 10% will buy a new house within the next two years.	Separate dining room		63%
(16) <u>Housing Plans of Families</u> , Crowell-Collier Pub. Co., New York, N.Y., June 1946.	A survey of readers of <u>The American Magazine</u> . 1,970 answered a mail questionnaire (66% returns). 27% intend to build or buy new homes.	Separate dining room		58%
(36) <u>What Kind of Homes do Families with Children Want?</u> Parents' Magazine Home Building Study, 1946.	A survey of readers (with children) of <u>Parents' Magazine</u> . 3,653 families answered a mail questionnaire (26.5% returns). 71.4% plan to build or buy a new home.	Separate dining room		Plan in Have Postwar <u>now</u> <u>Home</u> 60.7% 67.6%

TABLE 12. DEMAND FOR A DINING ROOM (Contd.)

Survey	Sample	Findings		
			Had <u>Prewar</u>	Want <u>Postwar</u>
(2) <u>Behind the Blueprints</u> , Better Homes and Gardens, Meredith Pub. Co., Des Moines, Ia., 1946.	A survey of 4,900 families who definitely plan to build a new home. Questionnaires were mailed and 42% were returned.	Separate dining room	74%	65%
		Dining rooms by money to be spent on the home:		
			<u>Prewar</u>	<u>Future</u>
		Under \$5,000	60%	50%
		\$5,000 - \$7,499	68	61
		\$7,500 - \$9,999	78	70
		\$10,000 - \$14,999	88	74
		\$15,000 and over	90	85
(10) <u>Collier's Housing Quiz</u> , Colliers, 1949.	A survey of 16,212 readers of the <u>Collier's Magazine</u> . No mention was made of the percentages planning to build or buy.	Separate dining room		48.2%
(27) <u>The New House Next Door</u> , Better Homes and Gardens, Des Moines, Ia., 1950.	1,960 questionnaires were mailed to families who plan to build new homes. 1,416 questionnaires were returned (72%).	Separate dining room <u>by price of home:</u>		<u>Percent</u>
		Under \$7,500		32
		\$7,500 - \$9,999		39
		\$10,000 - \$14,999		48
		\$15,000 - \$19,999		62
		\$20,000 and over		65
		All homes		51

General Likes and Dislikes (Dining Room)

The general decrease in the popularity of the dining room is probably due to a combination of changing family-living habits and architectural styles, and of increased building costs.

A survey revealed the tenant's main objections to dining rooms in public-housing units to be:¹

1. No natural light.
2. Dining room is too small and serves only as a passageway between living room and kitchen.
3. Requires more work.

The McCall's survey² determined likes and dislikes concerning the dining room. (See Table 13.)

TABLE 13. REASONS GIVEN FOR LIKING OR NOT LIKING PRESENT DINING ROOM

I like my present dining area because:		I do not like my present dining area because:	
It is big enough	49.3%	It is too small	38.3%
Easy place to serve meals	59.0	Hard place to serve meals	27.5
It is comfortable	57.6	It is not comfortable	23.7
Furniture fits well	48.6	The furniture does not fit	28.8
The family likes it	52.2	The family doesn't like it	18.8
It is cheerful	65.1	It is gloomy	15.1
Plenty of storage space	24.3	Not enough storage space	57.2
It is easy to clean	61.4	It is hard to clean	19.1
Furniture is new	24.7	Furniture is old	41.7

This survey listed "cheerfulness" and "storage space" at the head of the list of values as far as the dining room is concerned. Specific reasons most often mentioned for liking the dining room were: "it is cheerful"; "it is easy to clean"; "easy place to serve meals"; and "it is comfortable." High among the reasons for disliking the dining room were: "not enough storage space"; "furniture is old"; and "it is too small."

¹Livability Problems of 1,000 Families, NHA, FPHA, p. 22.

²What Women Want in their Dining Rooms of Tomorrow, McCall Corporation, 1944, p. 23.

Use of the Dining Room--Analysis

Comparison of the public-housing survey (No. 26) with the magazine surveys (Nos. 34 and 2) indicates that families living in public housing use the dining room less than the latter group; furthermore, they use it for a smaller number of activities. (See Chart VII and Table 14.)

Magazine surveys revealed a rather wide use of the dining room, with use of the room for eating at the head of the list. The public-housing survey, however, indicated that the dining room was used very little, even for eating purposes.

As previously pointed out, part of the reason for the different usage of rooms by families in public housing is that they have a disproportionately large number of children and families are overcrowded. Also, dining rooms are often quite small. For example, one public-housing survey indicated that the dining room, in the few instances when it was provided, was 6'-10" x 10'-0".¹

Another public-housing survey stated: "If dining rooms were designed with adequate space for dining, some families might prefer them to kitchens. However, the findings indicate that families would choose kitchens if dining space were set apart from kitchen equipment and provided with adequate natural and artificial lighting."² This survey concluded that housing unit plans should not include dining rooms.

Rogers suggests that the era of great formality in entertaining is passing since it is impossible in the servantless house and it cannot be tolerated too frequently in the one-servant house. Too, formal living is being limited to smaller groups. "The only reason to close off the dining room is to prepare and clear it. It has been found that a portable screen, a draw curtain or some other expedient will often serve as well for these brief periods."³

¹Livability Problems of 1,000 Families, NHA, FPHA, 1945, p. 39.

²Ibid., p. 22.

³Rogers, Tyler, Plan Your House to Suit Yourself, pp. 62-63.

SURVEY NO.	YEAR	SAMPLE SIZE
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BREAKFAST



LUNCH



DINNER

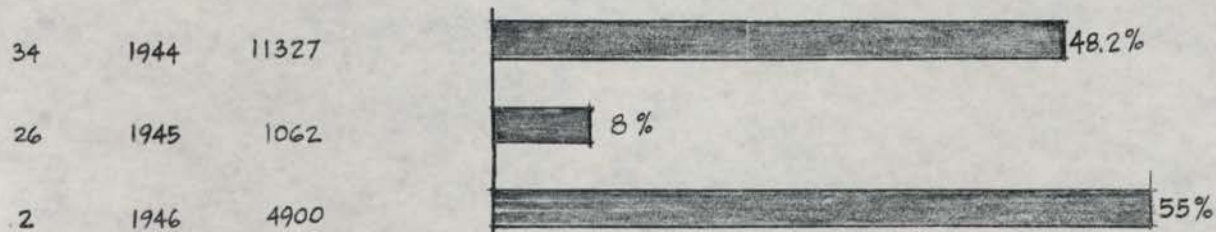


CHART VII
USE OF THE DINING ROOM FOR EATING

TABLE 14. USE OF THE DINING ROOM

Survey	Sample	Findings
(34) <u>What Women Want In Their Dining Rooms of Tomorrow</u> , McCall's Magazine, 1944.	A mail questionnaire contest of 11,327 <u>McCall's</u> subscriber families.	<p>Eating in the dining room:</p> <p>Breakfast 14.6%</p> <p>Lunches 21.2</p> <p>Dinner 48.2</p> <p>Serve guests 62.7</p> <p>Other uses of dining areas:</p> <p>Sleeping 3.3%</p> <p>Study 24.1</p> <p>Hobbies 18.8</p> <p>Writing 38.3</p> <p>Sewing 33.5</p> <p>Business 9.1</p> <p>Only for meals 30.7</p> <p>Games 2.7</p>
(26) <u>The Livability Problems of 1,000 Families</u> , NHA, FHHA, 1945.	A survey of 1,062 families living in low-cost public housing. This was a schedule-interview type of survey. Project managers were also interviewed. No measurement was made of those planning to build or buy new homes.	<p>Dining 8%</p> <p>Ironing 3</p> <p>Sewing 1</p> <p>Children's recreation (of families with children) 9</p> <p>Children's study (of families with children) 6</p>

TABLE 14. USE OF THE DINING ROOM (Contd.)

Survey	Sample	Findings	
		Usually Used Room	Sometimes Used Room
(2) <u>Behind the Blueprints.</u> Better Homes and Gardens, Meredith Pub. Co., Des Moines, Ia., 1946.	A survey of 4,900 families who definitely plan to build a new home. Questionnaires were mailed and 42% were returned.	Eat in dining room	
		Breakfast	8% 17%
		Lunch	12 20
		Dinner	53 25
		Family relaxation	1 2
		Entertain guests	3 6
		Play cards	5 6
		Serve refreshments	17 11

Comments and Evaluation (Separate Dining Room)

The varying demand for a dining room is, in general, related to need. For example: One finds an increased demand for the dining room among families with children. (Survey 36, Table 12, pp. 40-42.) Among families with children, there is more often need for a separate dining room with special floor coverings and wall surfaces than among families without children—at least, while the children are young since they often spill or even throw foods. In addition, some may argue that a separate dining room is necessary to gracious living and to take full advantage of the social aspect of the family meal. Also it may be needed after the children marry and bring their own families home for visiting.

The demand for a separate dining room is highest among families building the higher-priced houses. These families do more formal dining than other families. Too, the desire for this room among this group is not so often tempered by the need for economy measures.

No doubt in many instances, the desire for a dining room is rooted in tradition and is not related to need. That is, to some, a house is simply not a house without a dining room, and they will provide a dining room in their house plans even though no specific use of the room is anticipated.

In addition, the background of the individual might be an important consideration. A survey being conducted by the University of Illinois Small Homes Council shows, on preliminary examination, a significant correlation between the type of house lived in during the individual's youth, and the type of house and the size of rooms preferred in later life. A tentative hypothesis is that, in the main, attitudes of this nature crystallize during the individual's youth, particularly during the years from 10 to 20.

In addition, the prestige factor may enter the picture. That is, the dining room may serve as a mark of distinction since most of the higher-priced homes have one. Studies have shown that societies which place an emphasis upon materialistic preoccupations inevitably find many of their people copying the symbols of prestige set up by the well-to-do.

LIVING ROOM AND DINING ROOM COMBINED

Combination Preference—Analysis

An analysis of the surveys shows that the combination of the living room with the dining room is not very popular although it seems to be gaining in popularity. (See Chart VIII and Table 15.) Roughly, only three-tenths of the families want these rooms combined.

One survey (No. 23), made in 1936, showed a close negative correlation between money to be spent on the home and preference for a combination living-dining room. That is, as the amount to be spent on the home rose, the demand for a combination of the living and dining room decreased. A very recent survey (No. 27), however, did not support the 1936 survey. It indicated little or no consistent relationship between money to be spent on the home and demand for a combined living-dining room, even though there is a consistent relationship between the cost of the house and the desire for a separate dining room.

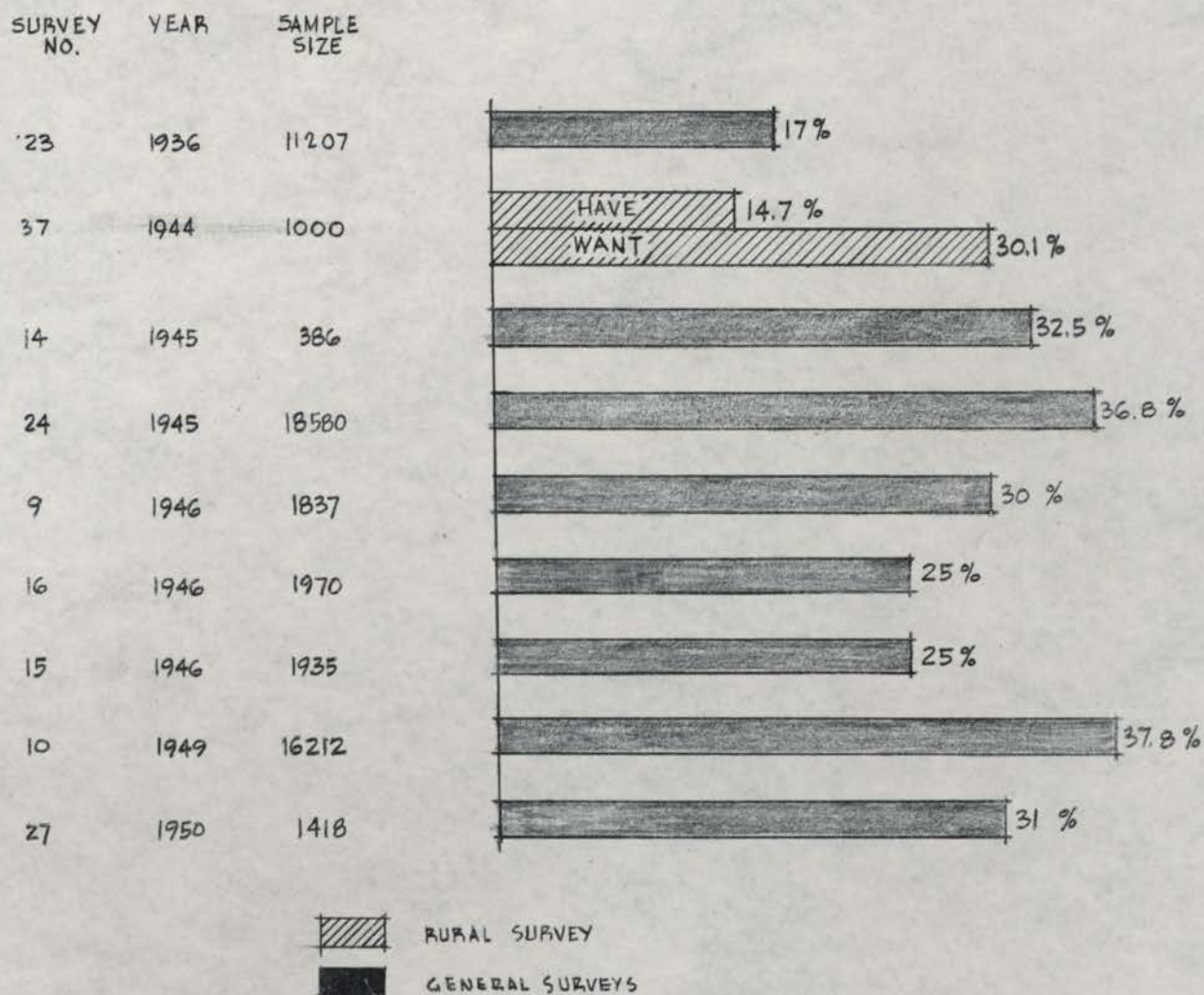


CHART VIII
DEMAND FOR LIVING AND DINING ROOM COMBINED

TABLE 15. LIVING AND DINING ROOMS COMBINED

Survey	Sample	Findings	
(23) "Small House Preview", <u>Architectural Forum</u> , pp. 406-420, Nov. 1936.	A mail survey of 11,207 families determining what people like. 21% may build within the next two years.	Living and dining rooms combined	17%
		Living and dining rooms combined by money spent on home	Of this 17% want- ing these rooms combined
		Under \$5,000	27.6%
		\$5,000 - \$6,000	24.1
		\$6,000 - \$7,000	11.6
		\$7,000 - \$8,500	19.9
		\$8,500 - \$10,000	12.5
		\$10,000 - \$15,000	3.5
		Above \$15,000	.3
(37) <u>What a Thousand Farm Families are Going to do About Building</u> , <u>Successful Farming</u> , 1944.	A survey of readers of <u>Successful Farming</u> . 1,000 families planning to build or remodel answered a mail questionnaire.	Living room and dining room combined	<u>Have</u> <u>Want</u> 14.7% 30.1%
(14) <u>Home Owner's Survey</u> , <u>Better Homes and Gardens Research Div.</u> , <u>Meredith Pub. Co.</u> , Des Moines, Ia., 1945.	A survey of 386 <u>Better Homes and Gardens</u> subscriber families who plan to build, buy, or remodel. (7.72% returns).	Living and dining room combined	<u>Percent</u>
		Build	31.7
		Buy	13.8
		Build or buy	32.5

TABLE 15. LIVING AND DINING ROOMS COMBINED (Contd.)

Survey	Sample	Findings	
(24) <u>The American Woman's Home of Tomorrow</u> , Part III, <u>The New House</u> , McCall Corp., New York, N.Y., 1945.	A survey of 18,580 <u>McCall's</u> subscriber families. 79.5% plan to build or buy a new house.	Living room and dining room combined	36.8%
(19) <u>Collier's Families Report Their Housing Plans for Tomorrow</u> , Crowell-Collier Research Project, June 1946.	A questionnaire was mailed to 3,000 representative <u>Collier</u> reader families. 1,837 families (61%) answered. 16% will build and 10% will buy new homes.	Living room and dining room combined	30%
(16) <u>Housing Plans of Families</u> , <u>The American Magazine</u> , Crowell-Collier Pub. Co., New York, N.Y., 1946.	A survey of readers of <u>The American Magazine</u> . 1,970 answered a mail questionnaire (66% returns). 27% of this group intend to buy or build a new home.	Living room and dining room combined	25%
(15) <u>Houses</u> , <u>Woman's Home Companion</u> , Crowell-Collier Pub. Co., New York, N.Y., 1946.	A survey of <u>Woman's Home Companion</u> readers. 1,935 answered a mail questionnaire (65% returns). 16% will build and 10% will buy a new home.	Living room and dining room combined	25%

TABLE 15. LIVING AND DINING ROOMS COMBINED (Contd).

Survey	Sample	Findings	
(10) <u>Collier's Housing Quiz</u> , Collier's, Jan. 1949.	A survey of 16,212 readers of <u>Collier's Magazine</u> . No mention was made of those planning to build or buy.	Living room and dining room combined	37.8%
(27) <u>The New House Next Door</u> , Better Homes and Gardens, Des Moines, Ia., 1950.	1,960 questionnaires were mailed to families who plan to build new homes. 1,416 questionnaires were returned (72%).	There is a gradual trend toward the combination living-dining room, but it stresses the fact that the dining room is still popular.	
		Living-dining room combination by money to be spent on a new house:	Percent
		Under \$7,500	25
		\$7,500 - \$9,999	37
		\$10,000- \$14,999	31
		\$15,000- \$19,999	29
		\$20,000 and over	31
		All homes	31

Use of the Living-Dining Room--Analysis

According to a public-housing survey (No. 26), "Only about half of the families use them (living and dining rooms combined) for daily dining; few use them occasionally....Some families have a dining table and chairs set up, but apparently for display; others use the entire areas as living rooms....It is apparent that large living-room areas or living room-dining room combinations designed to be used for dining are space wasted."¹ As before noted, the authors of this survey concluded that dining space should be provided other than in the living-room area.²

Comments and Evaluation

Architects seem to be generally in favor of a combined living-dining room. "An architects' competition for house plans sponsored in 1935 by General Electric revealed what architects would do with the living and dining rooms in the average middle-sized house if they did not have to bow to the whims of a client. Out of 2,200 plans submitted, more than half (80 per cent) made the dining area a part of the living room, or so related the two that the dining area could be used as an extension of the living room without any loss in continuity."³

The Swedish architects are in general agreement with this. "The room (living room) ought to have space enough for a dining table which will accommodate not only the family but also some guests—even if the family customarily takes its meals in the kitchen."⁴

The architects' solution of combining the living and dining rooms is unrealistic in terms of actual preference for, and use of, the living-dining room; however, in terms of the usual need for economy measures when designing the house, the architects' attitude toward the combination living-dining room is no doubt more realistic than first examination reveals. The architects feel that where space sacrifices are to be made, this combination of rooms is the most logical solution.

¹Livability Problems of 1,000 Families, NHA, FPHA, 1945, p. 22.

²Ibid., p. 24.

³Rogers, op. cit., p. 62.

⁴Swedish Cooperative Union and Wholesale Society's Architect's Office, Part 2, p. 55.

KITCHEN

Eating Facilities in the Kitchen--Analysis

Architects would like to know whether kitchen-dining spaces are considered desirable and if so, what type? Should there be a table in the kitchen proper, a nook, or a bar? Should the nook be separated from the kitchen by a full wall or not? Definite answers to these questions are not obtainable from the surveys as there were few exact definitions in the surveys of the terms, "nook," "dinette," and "alcove." In the tabulations below, all of these spaces were considered to be a part of the eating facilities in the kitchen.

Two surveys gave a choice of eating facilities in the kitchen. One survey (No. 2) indicated that 55 per cent of the surveyees preferred a built-in table or nook; 29 per cent preferred a detached breakfast table. The second survey (No. 36--families with children) showed 32.3 per cent preferred a built-in table and bench; 16.7 per cent preferred a counter and eating bar. (See Chart IX and Table 16.)

Results of two surveys (Nos. 14 and 24) revealed both great and small demand for the "breakfast nook." It is difficult to account for this wide range in view of the fact that both surveys were made in 1945 by magazines.

SURVEY NO. YEAR SAMPLE SIZE

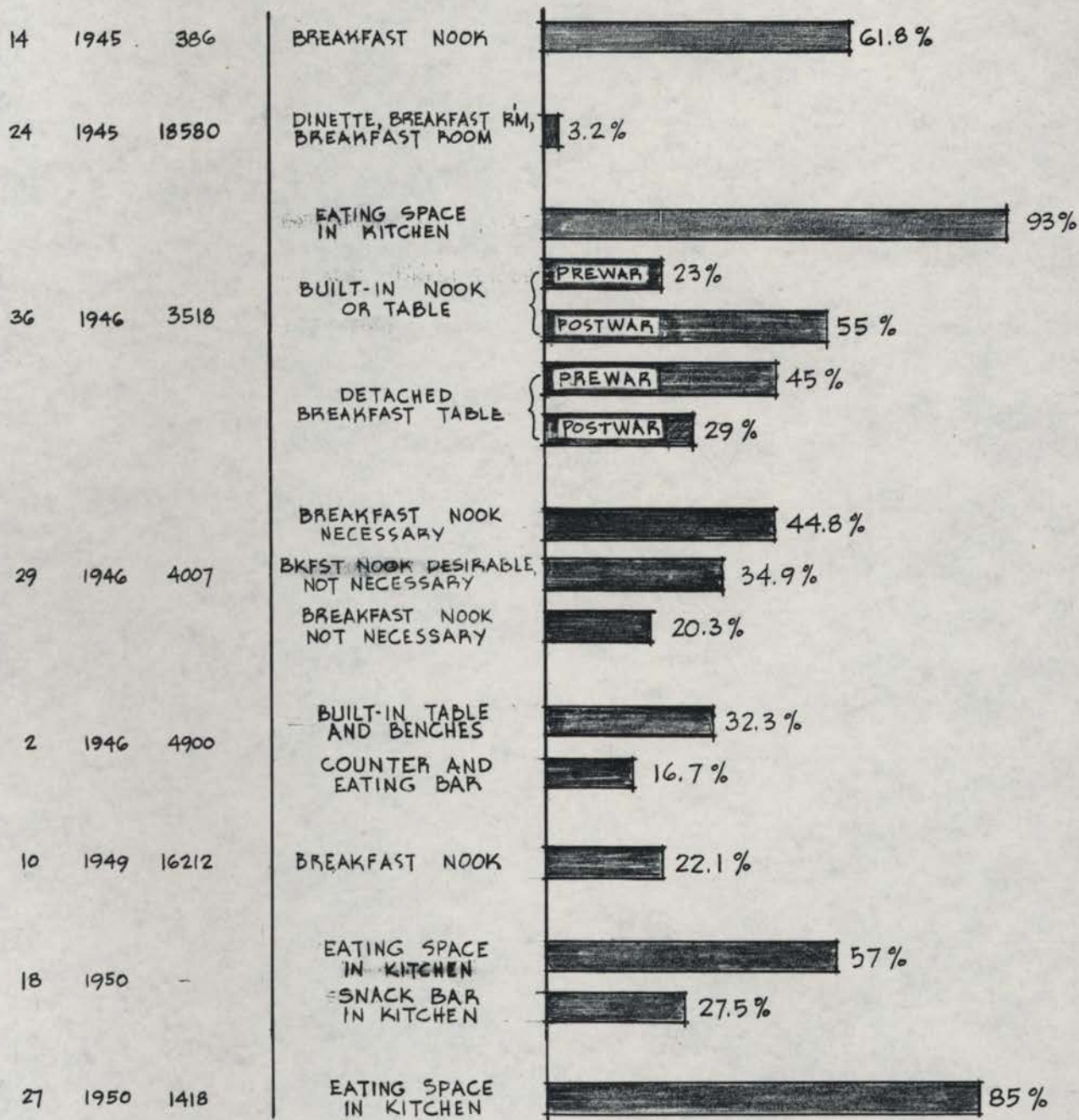


CHART IX
DEMAND FOR EATING SPACE AND EATING FACILITIES IN KITCHEN

TABLE 16. DEMAND FOR EATING FACILITIES IN THE KITCHEN

Survey	Sample	Findings								
(38) <u>What Women Want in Their Kitchens of Tomorrow</u> , McCall's Magazine Corp., New York, N. Y., 1944.	A survey of readers of the <u>McCall's Magazine</u> . 11,887 families entered a contest which employed the mail questionnaire technique. 20.2% plan to remodel their present home and 45.2% plan to build or buy.	Of 40 preferences arranged in order of their frequency, "I want some type of bar or nook," was in the 12th position.								
(14) <u>Home Owners Survey</u> , Better Homes and Gardens Research Div., Meredith Pub. Co., Des Moines, Ia., 1945.	A survey of 386 <u>Better Homes and Gardens</u> subscriber families who plan to build, buy, or remodel. (7.72% returns).	<table><tr><th><u>Breakfast nook</u></th><th><u>Percent</u></th></tr><tr><td>Build</td><td>64.1</td></tr><tr><td>Buy</td><td>51.7</td></tr><tr><td>Build or Buy</td><td>61.8</td></tr></table>	<u>Breakfast nook</u>	<u>Percent</u>	Build	64.1	Buy	51.7	Build or Buy	61.8
<u>Breakfast nook</u>	<u>Percent</u>									
Build	64.1									
Buy	51.7									
Build or Buy	61.8									
(24) <u>The American Woman's Home of Tomorrow</u> . Part III, <u>The New House</u> , McCall Corp., New York, N. Y., June 1945.	A survey of 18,580 <u>McCall's</u> subscriber families. 79.5% plan to build or buy a new home.	Dinette, breakfast room, or breakfast nook. 3.5%								

TABLE 16. DEMAND FOR EATING FACILITIES IN THE KITCHEN (Contd.)

Survey	Sample	Findings		
			<u>Present</u>	<u>Future</u>
(2) <u>Behind the Blueprints</u> , Better Homes and Gardens, Meredith Pub. Co., Des Moines, Ia., 1946.	A survey of 4,900 families who definitely plan to build a new home. Questionnaires were mailed and 42% were returned.	Built-in nook or table	25%	55%
		Detached breakfast table	45	29
(29) <u>Urban Housing Survey</u> , Saturday Evening Post Research Dept., Curtis Pub. Co., Nov. 1946.	4,007 families in 35 states and 118 urban centers were interviewed. From 55 to 60% of the interviews were with renters and 40 to 45% were with home owners. 34.3% expect to build or buy a house.	Breakfast nook considered a necessity		44.8%
		Breakfast nook desirable but not necessary		34.9
		Breakfast nook considered unnecessary		20.3
(36) <u>What Kind of Homes do Families with Children Want?</u> Parents' Magazine, Home Building Study, 1946.	A survey of readers (with children) of <u>Parents' Magazine</u> . 3,653 families answered a mail questionnaire (26.5% returns). 71.4% plan to build or buy a new home.	Built-in Table and Benches		Counter and Eating Bar
		Build	33.8%	16.8%
		Buy	35.7	17.4
		Remodel	29.2	15.6
		Total	32.3	16.7

TABLE 16. DEMAND FOR EATING FACILITIES IN THE KITCHEN (Contd.)

Survey	Sample	Findings	
(10) <u>Colliers' Housing Quiz</u> , Colliers, Jan. 1949.	A survey of 16,212 readers of <u>Collier's Magazine</u> . No mention was made of those planning to build or buy.	Breakfast nook	22.1%
(18) "Public's Blueprint of Kind of Home it Wants," <u>Practical Builder</u> , pp. 135-137, Oct. 1950.	Thousands of questionnaires were mailed, but no mention was made as to the exact number. 96.5% plan to build; 2.5% plan to buy; and 2.5% plan to remodel. 51% will build in 6 months; 12% in 7 months to a year; 20% in 1-3 years; and 5% in 3-5 years.	Snackbar in kitchen	27.5%
		Eating space in kitchen planned	57
(27) <u>The New House Next Door</u> , Better Homes and Gardens, Des Moines, Ia., 1950.	1,960 questionnaires were mailed to families who plan to build new homes. 1,416 questionnaires were returned (72%).	Eating space in the kitchen planned	85%

Use of the Kitchen--Analysis

A survey of public-housing projects (No. 13) in New York City showed that there was a relationship between the percentage of families who preferred to eat their meals in the kitchen and the size of the family. The larger families wanted to eat in the kitchen more often than did the smaller families. Another survey of families living in public housing (No. 32) revealed that all preferred to eat meals in the kitchen rather than the living room, even though the living room was larger. Reasons given for this were: 1) "the mess created by the children"; 2) "the kitchen is handier"; 3) "less walking on 'hard floors'."

Still another public-housing survey brought to light other factors. The most frequently mentioned reasons for eating in the kitchen were: "we like it"; "we have always dined in kitchens"; "linoleum floor is easier to clean"; "too much clean-up after children in the living room." The objections to kitchen-dining space were "inadequate area", and "undesirable location of area."¹

The reason, in part, for the wide usage of the kitchen for eating by families living in public housing is that usually their only alternative is eating in the living room. (See Chart X and Table 17.) Moreover, as before pointed out, these families have a relatively high number of children.

A magazine survey (No. 2), concerned with families that were more representative of the general population, indicated less use of the kitchen for eating.

Various other uses of the kitchen are shown in Table 18. Obviously the kitchen is the center of activity for families living in public housing. (Survey 26.) Supportive evidence is furnished by another public-housing survey which indicated that: "The kitchen is more often the place for family gathering and for the entertainment of intimate friends."² In addition, "Cooking, dining, dishwashing, laundry work, care of the baby, play,³ study, repairing, visiting, supervision, budgeting, and many other activities, all take place in this small room (the kitchen) which must, besides, house countless necessary things."⁴

¹The Livability Problems of 1,000 Families, NHA, FPHA, 1945, p. 27.

²Public Housing Design, 1946, p. 103.

³Agan, Tessie, "Housing and the Family Life Cycle," Journal of Home Economics, May 1950. Agan feels that the kitchen should be large enough to provide efficient centers, play space for children, space for the recital of the day's events by husband and children, and space for informal meals. Pickering (Shelter for Family Living) also favors a play area in the kitchen reasoning that the mother's time is spent largely in the kitchen. Moreover, he contends that this will not affect the efficiency of the kitchen since the work centers will be left intact.

⁴Public Housing Design, 1946, p. 106.

SURVEY NO.	YEAR	SAMPLE SIZE
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32	1942	30
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26	1945	1000
----	------	------

2	1946	4900
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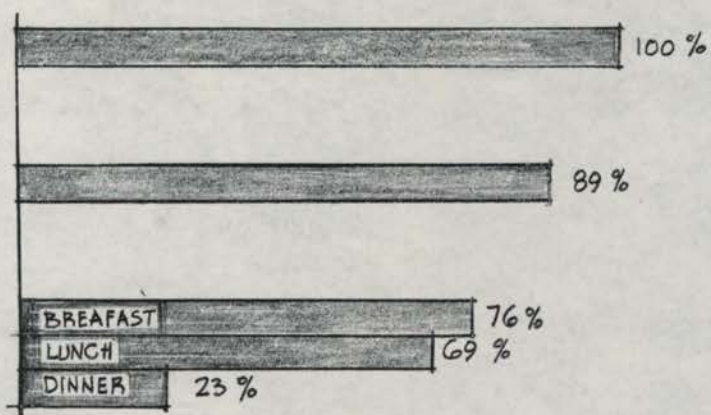


CHART I.
USE OF THE KITCHEN FOR EATING

TABLE 17. EATING IN THE KITCHEN

Survey	Sample	Findings		
(32) Wayman, Leonard, "The Public Tenant Speaks," <u>Architectural Forum</u> , pp. 217-222, April 1942.	30 families living in public housing projects in 8 northern cities were interviewed. No measurement was made of those planning to build or buy.	Always eat in kitchen 100%		
(26) <u>Hivability Problems of 1000 Families</u> , National Housing Agency, FPHA, 1945.	A survey of 1,062 families living in low-cost public housing. No measurement was made of those planning to build or buy.	Dining in the kitchen 89%		
(2) <u>Behind the Blueprints</u> , Better Homes and Gardens, Meredith Pub. Co., Des Moines, Ia. 1946.	A survey of 4,900 families who definitely plan to build a new home. Questionnaires were mailed and 42% were returned.	Meal	Usually eat in kitchen	Sometimes eat in kitchen
		Breakfast	76%	16%
		Lunch	69	14
		Dinner	23	12

TABLE 18. USE OF THE KITCHEN

Survey	Sample	Findings
(26) <u>The Livability Problems of 1000 Families</u> , National Housing Agency, FPHA, 1945.	A survey of 1,062 families living in low-cost public housing. This was a schedule-interview type of survey. Project managers were also interviewed. No measurement was made of those planning to build or buy new homes.	<div>Entertaining guests 25%</div> <div>Children's study (of families with children of school age) 32</div> <div>Children's recreation (of the families with children) 32</div> <div>Clothes drying 32</div> <div>Ironing 82</div> <div>Sewing 27</div>
(3) <u>Beyers, Glenn, Farm Housing in the North-East</u> , Cornell Univ. Press, Ithaca, New York, 1949.	A survey of 607 farm families in the Northeast. The interview-schedule method was employed. No measurement was made of those planning to build or buy new homes.	<div>Upper Middle Lower</div> <div>(Summer)</div> <div>Ironing 56.5% 66.6% 57.5%</div> <div>Washing 25.9 38.1 27.9</div> <div>(Winter)</div> <div>Ironing 67.6% 79.2% 71.9%</div> <div>Washing 54.8 59.3 58.4</div>

Laundry Facilities in the Kitchen

As to use of the kitchen for laundry work by families living in public housing: "Practically all families who do not have access to central laundries wash in kitchens, since few send their washings to commercial laundries and few have utility rooms."¹ The tenants' main objections to using the kitchen for laundry, according to this survey (No. 26), were:

1. Inadequate space.
2. Confusion created by simultaneous cooking and laundry operations.
3. Inadequate ventilation, and collection of steam and moisture on living-room walls and furniture where only partial partitions exist.

Specific recommendations for kitchen areas in public-housing units made as a result of this survey were:

1. Sink-laundry trays to be provided in each kitchen regardless of accessibility to central laundry facilities, unless trays are provided in utility rooms.
2. Sink-laundry trays to be equipped with one drainboard of heat-resistant material.
3. The height of the sink-tray is to be 36 inches.
4. Drain to be supplied in kitchen area of units of one-bedroom sizes where central laundry facilities are unavailable.
5. Three to six feet of counter area, exclusive of drainboard, varying with unit sizes.
6. Kitchen area to be provided with one ceiling light and one double-service outlet.²

Other recommendations as to laundry facilities in the kitchen were given in a public-housing survey (No. 19): "In projects where no central laundry facilities are furnished, it must be assumed that all the family laundry will be done at home. Adequate provisions for this work will include not less than a deep tray in the kitchen, space for operation of a washing machine (and storage for it when not in use), access to an outdoor drying yard or, if that is not possible, sufficient drying space indoors (some space for drying indoors is necessary in any event), and, finally, space for the storage and use of the ironing board and other necessary items required by this work."³

¹The Livability Problems of 1,000 Families, NHA, FPHA, 1945, p. 27.

²Ibid., pp. 40-41.

³Public Housing Design, 1946, p. 111.

Size Preference for Kitchens—Analysis

Comparison of the first two surveys (Nos. 23 and 38) with the latter ones (Nos. 9, 15 and 16) indicates slightly increased preference for larger kitchens. (See Chart XI and Table 19.) Without a definition of the terms, "large" and "compact", in the first survey (No. 23), however, one cannot conclude that such a trend exists. The interpretation of size also depends upon whether or not the eating facilities are to be included in the kitchen.

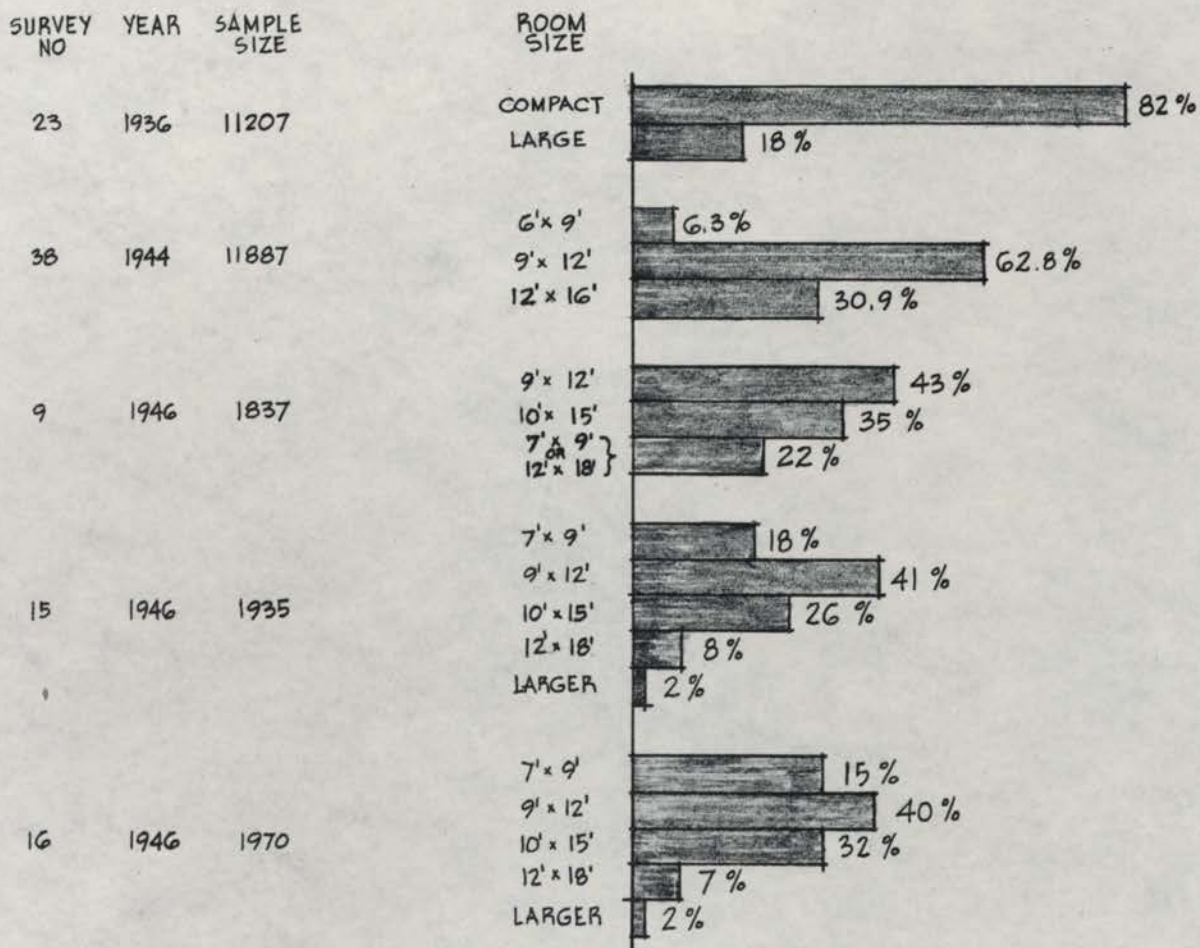


CHART XI
PREFERRED KITCHEN SIZE

TABLE 19. PREFERRED SIZE OF THE KITCHEN

Survey	Sample	Findings	
(23) "Small House Preview", <u>Architectural Forum</u> , pp. 406-420, Nov. 1936.	A mail survey of 11,207 families determining what people like. 21% may build within the next two years.	Wanting kitchen "compact"	Wanting kitchen "large"
		Total number	82.0% 18.0%
		<u>By cost of home</u>	
		Under \$5,000	53.4% 42.3%
		\$5,000 - \$6,000	61.0 34.9
		\$6,000 - \$7,000	65.6 31.0
		\$7,000 - \$8,500	64.9 31.8
		\$8,500 - \$10,000	69.7 27.2
		\$10,000 - \$15,000	72.4 26.6
		Above \$15,000	61.9 36.7
(38) <u>What Women Want in Their Kitchens of Tomorrow</u> , McCall's Magazine, McCall Corp., New York, N.Y. 1944.	A survey of readers of <u>McCall's Magazine</u> . 11,887 families entered a contest which employed the mail questionnaire technique. 20.2% plan to remodel their present home and 45.2% plan to build or buy.	Two kitchens were described (pictorial- ly) to 11,887 families who entered a contest. One was a "tried-and-true" kitchen similar to the best kitchens of today, and the other was a "day- after-tomorrow" kitchen of a highly experimental nature. 62.6% preferred the former and 36.9% preferred the latter.	
		<u>Ideal kitchen size for 10,064 women</u>	
		6' x 9'	6.3
		9' x 12'	62.8
		12' x 16'	30.9

TABLE 19. PREFERRED SIZE OF THE KITCHEN (Contd.)

Survey	Sample	Findings	
(9) <u>Collier's Families Report their Housing Plans for Tomorrow.</u> Crowell-Collier Research Project, June 1946.	A questionnaire was mailed to 3,000 representative <u>Collier</u> reader families. 1,837 families (61%) answered. 16% will build and 16% will buy a new home.	<u>Size</u> 9' x 12' 10' x 15' 7' x 9') - 12' x 18')	<u>Percent</u> 43 35 22
(15) <u>Houses, Woman's Home Companion, Crowell-Collier Pub. Co., New York, N. Y., 1946.</u>	A survey of <u>Woman's Home Companion</u> subscribers. 1,935 answered a mail questionnaire (65% returns). 16% will build and 9% will buy a house in the next two years.	No answer 7' x 9' 9' x 12' 10' x 15' 12' x 18' larger	5 18 41 26 8 2
(16) <u>Housing Plans of Families, The American Magazine, Crowell-Collier Pub. Co., New York, N. Y., June 1946.</u>	A survey of readers of <u>The American Magazine</u> . 1,970 answered a mail questionnaire (66% returns). 27% intend to buy or build new homes.	Size preferred by future builders: 7' x 9' 9' x 12' 10' x 15' 12' x 18' larger	15 40 32 7 2

Working Heights Preferred in Kitchens--Analysis

Wilson, Roberts, and Thayer,¹ allowing 2 inches for table-top and clearance above thighs, found preferred sitting-position heights for kitchen equipment to be:

Kitchen planning desk	25 inches
Mixing table	24
Ironing board	24
Sewing table	24

They also measured preferred work-surface heights for women in a standing position. These are shown in Table 20.

TABLE 20. PREFERRED WORK-SURFACE HEIGHT

Height of Person	Preferred Work-Surface Heights		
	Minimum	Maximum	Average
Under 5'-4"	30.50 inches	33.00 inches	32.10 inches
5'-4" to 5'-4½"	32.50	34.00	33.10
5'-5" to 5'-5½"	32.50	34.00	33.00
5'-6" to 5'-6½"	32.50	33.50	33.00
5'-7" to 5'-7½"	32.50	34.00	32.20
5'-8" to 5'-8½"	32.75	36.00	34.56
5'-9" and over	35.00	36.50	35.70

A study by the American Public Health Association points out that: "In a recent study of the heights preferred for different kitchen tasks by 562 American women, it was found that 82 per cent of them could use, without being conscious of strain, a dishwashing height of 32½ inches, and a rolling height of 33½ inches. The height preferred for beating was in most cases two inches less than that for rolling."²

¹Agan, Tessie, The House, p. 340.

²"Basic Principles of Healthful Housing," Housing for Health, American Public Health Association, p. 203.

General Complaints About the Kitchen

A public-housing survey (No. 19) disclosed two major complaints about the kitchen: 19 per cent of the families reported having inadequate work space and 31 per cent had inadequate storage for perishable foods. Another public-housing survey (No. 26) found three complaints regarding kitchen storage: 1) "too little provided"; 2) "too little closed"; and 3) "too much out of reach."¹

Additional complaints regarding the kitchen in general were:

1. Work areas too small.
2. Kitchen-dining areas too small, insufficiently lighted and undesirably located.
3. Inadequate ventilation in some projects in south.
4. Inadequate, or no, work-top area.²

Specific objections to kitchen areas were: "inadequate to seat family"; "dining space too close to stove"; "can't work together"; "no space to put things"; "must use stove for work table"; and "must move furniture out when we wash".³

Still more complaints were registered in a magazine survey.
(See Table 21.)

An analysis of 103 kitchen plans by the University of Illinois Small Homes Council⁴ disclosed weaknesses of kitchens. Faults most frequently found were:

	<u>Times Found</u>
1. Storage space in base cabinet insufficient	92
2. Wall cabinet storage inadequate	77
3. Too little counter space (total) provided	67
4. No counter adjacent to range	61
5. Traffic through work area	59
6. Too little window area	57

¹Livability Problems of 1,000 Families, NHA, FPHA, p. 33.

²Ibid., p. 25.

³Ibid., p. 38.

⁴Kitchen Planning Standards, Small Homes Council, University of Illinois, October 1949, p. 2.

TABLE 21. COMPLAINTS ABOUT THE KITCHEN

Survey	Sample	Findings
(38) <u>What Women Want in Their Kitchens of Tomorrow</u> , McCall's Magazine, McCall Corp., New York, N. Y., 1944.	A survey of readers of the <u>McCall's Magazine</u> . 11,887 families entered a mail questionnaire contest. 45.2% plan to build or buy and 20.2% plan to remodel their present house.	<div>Not enough work space 61.0%</div> <div>Not enough storage space 59.6</div> <div>Inconvenient to work in 41.5</div> <div>Too small 34.0</div>

Comments and Evaluation (Kitchen)

Recommendations for kitchen storage areas in public-housing units made as a result of the above-mentioned survey (No. 26) were:

1. One base cabinet not less than 2' x 3' for 1-bedroom units; two base cabinets not less than 2' x 3' each, for all larger units; or the equivalent amount of base cabinet area. Each base cabinet to be equipped with one shelf and one drawer.
2. From 18 to 30 feet of open and closed shelving to be provided in addition to base cabinets--amounts to vary with unit sizes.
3. At least one-half of storage area, exclusive of base cabinets, to be reachable.
4. Two-thirds of all shelving, exclusive of base cabinets, to be closed. Open area preferably located over sink.
5. Cabinets for food should be preferably located on an inside wall and at a sufficient distance from the stove to be reasonably cool.¹

As before indicated, recommendations made as a result of surveys of families living in public-housing units are not necessarily valid with respect to other groups. Too often they are "minimum" minimum requirements, and at times they are inflexible in that they are not related to unit sizes, as is evident by the recommendations made as a result of a public-housing survey (No. 26). In addition, some of the recommendations are too general to be of much value.

The first recommendation given above, for instance, is inadequate even in terms of minimum requirements, assuming a base cabinet 2 feet deep and 3 feet wide is referred to.

The University of Illinois Small Homes Council² recommends the following amounts of base cabinets (36 inches high and 24 inches deep) for a family of four:

For Ample Storage Space:

Liberal supplies	13'-6" (including 36 inches under sink bowl)
Limited supplies	11'-0" (including 30 inches under sink bowl)

For Minimum Storage Space:

Liberal supplies	11'-0" (including 30 inches under sink bowl)
Limited supplies	8'-6" (including 24 inches under sink bowl)

¹The Livability Problems of 1,000 Families, NHA, FPHA, p. 41.

²Cabinet Space for the Kitchen, Small Homes Council, University of Illinois, February 1949, p. 6. Storage requirements were determined on the basis of typical supply lists as determined by the survey method.

The University of Illinois Small Homes Council recommends arranging the kitchen in four centers -- sink center, range center, serving center, and mixing center.¹ These four units, properly arranged and outfitted with utensils, dishes and food items, should be related to each other so that work flows conveniently from one center to another. "Space can be saved by combining wall-cabinet storage in kitchen centers which are closely related in function, appliance used, or counter space needed--if these centers are adjacent."²

In another publication by the Small Homes Council, reasons are given for not isolating the centers. "An assembly made up of isolated centers is not to be recommended because 1) traffic cuts through the work triangle; 2) difficulty is encountered in locating dinnerware cabinets near the sink; 3) the advantages of continuous counter and multiple use of such counter is lost; 4) more cabinets are needed to meet requirements when centers are combined; and 5) the swing of doors is likely to interfere with appliances and cabinets."³

Wilson suggests that the cost of the entire kitchen may be minimized by the following procedures:

1. Plan counter space to provide the minimum adequate amount of work surface needed at each center.
2. Utilize the available storage space above and below each surface.
3. Provide for the remaining storage needs by means of floor-to-ceiling cabinets.⁴

She also suggests that the kitchen be arranged so that the sum of the distances between range, sink, and meal table (or dining-room door) is as small as possible.⁵ Heiner and McCullough place special emphasis on the provision for storage of utensils and foods at place of first use.⁶

¹Cabinet Space, Small Homes Council, University of Illinois, February 1949, pp. 4-5.

²Ibid., p. 7.

³Handbook of Kitchen Design, Small Homes Council, University of Illinois, 1950, p. 61.

⁴Wilson, Maud, Considerations in Planning Kitchen Cabinets, p. 5.

⁵Ibid., p. 9.

⁶Heiner, Mary, and McCullough, Helen E., Kitchen Cupboards that Simplify Storage, 1947, p. 2.

The kitchen is one of the most studied rooms in the house. A series of University of Illinois Small Homes Council publications represent the latest studies in this field. The Handbook of Kitchen Design¹ contains sound recommendations for planning kitchen space.

Most surveys do not recognize the increasing popularity of automatic laundry equipment (washers and dryers). An automatic laundry presents new planning considerations in regard to kitchens, utility rooms and basements. Some space requirements have been set up by Helen McCullough, assistant professor of home economics, University of Illinois, but these are as yet unpublished.

¹Handbook of Kitchen Design, Small Homes Council, University of Illinois, 1950.

KITCHEN AND LIVING ROOM COMBINED

Combination Preference--Analysis

Only one survey attempted to determine the demand for the combined kitchen and living room. (See Table 22, Survey 9.) About three-tenths of the 1,837 families surveyed wanted these two rooms combined.

Use of the Kitchen-Living Room--Analysis

Another survey (No. 20) indicated that the kitchen was often used as a living room in rural Sweden. This survey also found that in urban areas: "The importance of the kitchen as a living room decreases as the size of the apartment increases."¹

General Complaints

A public-housing survey (No. 32) revealed that, where there were half partitions between the kitchen and living room, 50 per cent of the surveyees wanted full partitions with a door. Another public-housing survey (No. 26) brought out several objections to partial partitions between living rooms and kitchens, namely: 1) kitchen within view of living room; 2) living room exposed to odors and dampness from kitchen cooking and laundry work; and 3) lack of privacy, both for living room and kitchen.²

¹Rierner, Svend, "A Research Note on Sociological Home Planning," American Journal of Sociology, May 1941, p. 868.

²Livability Problems of 1,000 Families, NHA, FPHA, p. 14.

TABLE 22. DEMAND FOR A KITCHEN-LIVING ROOM COMBINATION

Survey	Sample	Findings
(9) <u>Collier's Families</u> <u>Report Their Housing</u> <u>Plans for Tomorrow,</u> Growell - Collier Research Project, 1946.	A questionnaire was mailed to 3,000 representative <u>Collier</u> reader families. 1,837 families (61%) answered. 16% will build and 10% will buy a new home.	Kitchen-living room combination 30%

KITCHEN AND DINING ROOM COMBINED

Only four of the surveys analyzed treated this topic; moreover, they only cover a period of two years. (See Chart XII and Table 23.) It appears, however, that most families do not want to combine the kitchen and dining room, only about one-tenth favoring this combination. A public-housing survey (No. 3) indicated: "The kitchen-dining room needs more study. It is the most used room in the house...."¹

Comments and Evaluation

At first examination, it would appear that families hold contradictory attitudes. That is, they want to eat in the kitchen, yet they do not want the dining area combined with the kitchen. Obviously families interpreted the question to mean that a dining room would not be included in the house plans if dining space was provided in the kitchen. More than half of the families want a separate dining room regardless of other provisions made for eating space.

The conclusion can be drawn that the average family wishes to have an informal dining space in the kitchen. At the same time, the family expects to have an additional space for more formal dining, either in a dining room proper or in one part of the living room.

¹Wayman, Leonard, "The Public Tenant Speaks," Architectural Forum, April 1942, pp. 217-222.

SURVEY NO.	YEAR	SAMPLE SIZE
---------------	------	----------------

38	1944	11887	SEE NOTE A	9.2 %
----	------	-------	------------	-------

9	1946	1837		17%
---	------	------	--	-----

15	1946	1935		14%
----	------	------	--	-----

16	1946	1970		14%
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NOTE A : HALF PARTITION BETWEEN COOKING
AREA AND A COMBINED DINING AND
RECREATIONAL AREA

CHART XII
DEMAND FOR COMBINATION KITCHEN-DINING ROOM

TABLE 23. KITCHEN-DINING ROOM COMBINATION

Survey	Sample	Findings
(38) <u>What Women Want in Their Kitchen of Tomorrow</u> , McCall's Magazine, McCall Corp., New York, N.Y., 1944.	A survey of readers of the <u>McCall's Magazine</u> . 11,887 families entered a mail questionnaire contest. 45.2% plan to build or buy and 20.2% plan to remodel their present house.	Half-partition between cooking area and a combined dining and recreation area 9.2%
(9) <u>Collier's Families Report their Housing Plans for Tomorrow</u> , Crowell-Collier Research Project, 1946.	A questionnaire was mailed to 3,000 representative <u>Collier</u> reader families. 1,837 families (61%) answered. 16% expect to build or buy a home.	Kitchen and dining room combined 17%
(15) <u>Houses</u> , Woman's Home Companion, Crowell-Collier Pub. Co., New York, N. Y., 1946.	A survey of <u>Woman's Home Companion</u> readers. 1,935 answered a mail questionnaire (65% returns). 16% will build and 9% will buy a new home in the next 2 years.	Kitchen and dining room combined 14%
(16) <u>Housing Plans of Families</u> The American Magazine, Crowell-Collier Pub. Co., New York, N. Y., 1946.	A survey of readers of <u>The American Magazine</u> . 1,970 answered a mail questionnaire (66% returns). 27% intend to buy or build a new home.	Kitchen and dining room combined 14%

BEDROOMS

Number of Bedrooms Preferred--Analysis

Approximately five-tenths of all the surveyees want three bedrooms; three-tenths want two bedrooms; and two-tenths want four bedrooms or more. Only a very few want just one bedroom.

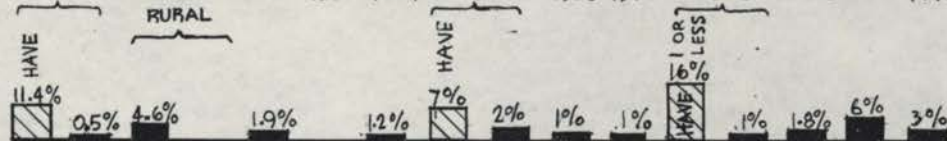
Three surveys (Nos. 37, 2 and 36) compared the number of bedrooms which families had with the number of bedrooms desired. (See Chart XIII and Table 24.) The number of persons wanting 2-bedroom houses was about equal to those having two bedrooms. Far more families wanted three bedrooms than those who had them. The number wanting four-bedroom houses was about equal to those having them, with the exception of the survey (No. 36) concerned with families with children. In this group, almost three times as many families wanted four-bedroom houses as had them.

The surveys are not sufficiently detailed to determine the relationship between the number of persons in the family and the number of bedrooms desired.

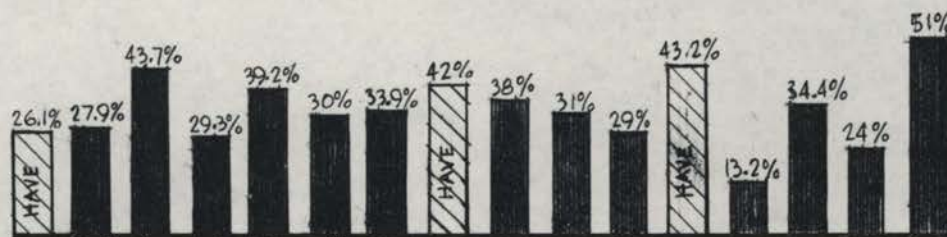
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 SAMPLE SIZE → 1000 18580 386 1837 4007 4900 1935 1970 3518 16212 1418

NUMBER OF ROOMS
 WANTED ↓

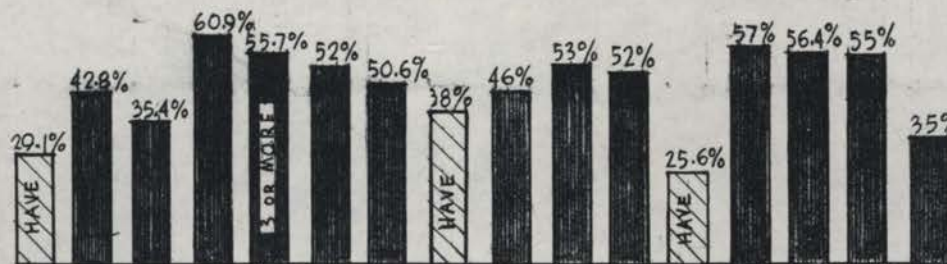
ONE ROOM



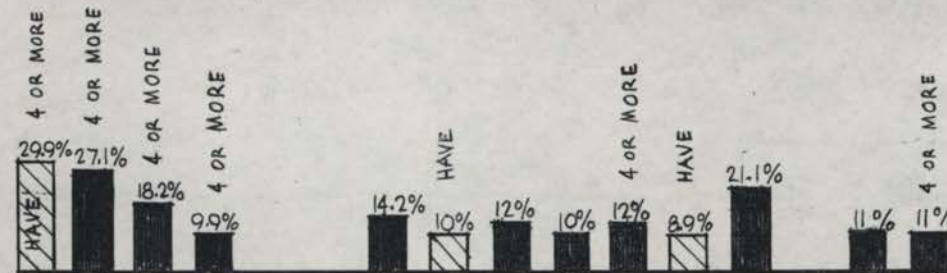
TWO ROOMS



THREE ROOMS



FOUR ROOMS



FIVE ROOMS

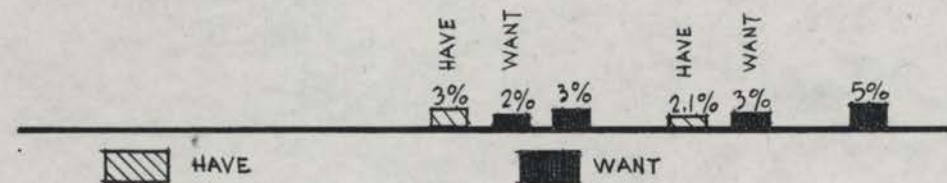


CHART XIII
 NUMBER OF BEDROOMS WANTED

TABLE 24. NUMBER OF BEDROOMS WANTED

Survey	Sample	Findings	
(39) <u>Wilson, M. and Wells, L., House Planning Ideas of Oregon Rural Women, Oregon Agriculture Experiment Station, 1940.</u>	A survey of 450 Oregon homemakers. 60% lived on farms and the rest in villages and suburban areas. No measurement was made of those planning to build or buy.	<u>Bedrooms on first floor</u>	<u>Percent</u>
		1	99
		2	34
(37) <u>What a Thousand Farm Families are Going to Do About Building, Successful Farming, 1944.</u>	A survey of readers of <u>Successful Farming</u> . 1,000 families planning to build or remodel, answered a mail questionnaire.	<u>Bedrooms</u>	<u>Present Home</u> <u>Postwar Home</u>
		1	11.4%
		2	26.1
		3	29.1
		4 or more	29.9
			42.8
			27.1
(24) <u>The American Woman's Home of Tomorrow, Part I, Architectural Preferences, McCall Corp., New York, N.Y., 1945.</u>	A survey of 18,530 <u>McCall's</u> subscriber families. 78.3% will build or buy new homes.	<u>Bedrooms</u>	<u>Percent</u>
		1	4.6
		2	43.7
		3	35.4
		4 or more	18.2
(24) <u>The American Woman's Home of Tomorrow, Part III, The New House, McCall Corp., New York, 1945.</u>	A survey of 18,530 <u>McCall's</u> subscriber families. 79.5% plan to build or buy a new home.	<u>Bedrooms</u>	<u>Percent</u>
		2	29.3
		3	60.9
		4 or more	9.9

TABLE 24. NUMBER OF BEDROOMS WANTED (Contd.)

Survey	Sample	Findings			
(14) <u>Home Owners Survey.</u> Better Homes and Gardens Research Div., Meredith Pub. Co., Des Moines, Ia., 1945.	A survey of 386 <u>Better Homes and Gardens</u> subscriber families who plan to build, buy or remodel. (7.72% returns).	<u>Bed- rooms</u>	<u>Build</u>	<u>Buy</u>	<u>Build or Buy</u>
		1	1.2%	3.4%	1.9%
		2	38.3	37.9	39.2
		3 or more	51.9	55.2	55.7
(9) <u>Collier's Families</u> <u>Report their Housing</u> <u>Plans for Tomorrow,</u> <u>Crowell-Collier</u> <u>Research Project, 1946.</u>	A questionnaire was mailed to 3,000 representative <u>Collier</u> reader families. 1,837 families (61%) answered. 16% will build and 10% will buy a new home.	<u>Number of bedrooms planned</u>		<u>Percent</u>	
		1		0	
		2		30	
		3		52	
(29) <u>Urban Housing Survey.</u> <u>Saturday Evening Post</u> <u>Research Dept., Curtis</u> <u>Pub. Co., 1946.</u>	4,007 families in 35 states and 118 urban centers were interviewed. 55 to 60% of the interviews were with renters and 40 to 45% were with home owners. 34.3% expect to build or buy a new house.	<u>Number of bedrooms wanted</u>		<u>Percent</u>	
		1		1.2	
		2		39.9	
		3		50.6	
		4		14.2	
(2) <u>Behind the Blueprints.</u> <u>Better Homes and Gardens,</u> <u>Meredith Pub. Co., Des</u> <u>Moines, Ia., 1946.</u>	A survey of 4,900 families who definitely plan to build a new home. Questionnaires were mailed and 42% were returned.	<u>Number of bed- rooms desired</u>	<u>Present</u>	<u>Future</u>	
		1	7%	2%	
		2	42	38	
		3	38	46	
		4	10	12	
		5	3	2	

TABLE 24. NUMBER OF BEDROOMS WANTED (Contd.)

Survey	Sample	Findings			
(15) <u>Houses, Woman's Home Companion, Crowell-Collier Pub. Co., New York, N.Y., 1946.</u>	A survey of <u>Woman's Home Companion</u> readers. 1,935 answered a mail questionnaire (65% returns). 16% will build and 9% will buy a new house in the next 2 years.	<u>Bedrooms</u>	<u>Percent</u>		
		No answer	2		
		1	1		
		2	31		
		3	53		
		4	10		
		5	3		
(16) <u>Housing Plans of Families, The American Magazine, Crowell-Collier Pub. Co., New York, N.Y., 1946.</u>	A survey of readers of <u>The American Magazine</u> . 1,970 answered a mail questionnaire (66% returns). 27% intend to buy or build new homes.	<u>All future buyers</u>	<u>Future builders</u>	<u>Future buyers</u>	
		<u>Bedrooms</u>			
		1	13	13	13
		2	29	26	35
		3	52	54	49
		4 or more	12	16	10
		don't know	1	3	5
(36) <u>What Kind of Homes do Families with Children Want? Parents' Magazine Home Building Study, 1946.</u>	A survey of readers (with children) of <u>Parents' Magazine</u> . 3,653 families answered the mail questionnaire (26.5% returns). 71.4% plan to build or buy a new home.	<u>Bedrooms</u>	<u>Have</u>	<u>Want</u>	
		1 or less	16.0%	0.25	
		2	43.2	13.2	
		3	25.6	57.0	
		4	8.9	21.1	
		5	2.1	3.0	
		6 or more	1.0	0.5	

TABLE 24. NUMBER OF BEDROOMS WANTED (Contd.)

Survey	Sample	Findings	
(3) <u>Beyers, Glenn, Farm Housing in the Northeast, Cornell Univ. Press, Ithaca, N. Y., 1949.</u>	A survey of 607 farm families in the Northeast. The interview-schedule method was used. No measurement was made of those planning to build or buy new homes.	<u>Number of bedrooms preferred on first floor</u>	
		none	Percent 0.0
		1	34.0
		2	29.0
		3	8.0
		4	4.0
		<u>Number of bedrooms preferred on second floor</u>	
		none	Percent 8.0
		1	4.7
		2	23.8
(10) <u>Collier's Housing Quiz, Collier's, Jan. 1949.</u>	A survey of 16,212 readers of <u>Collier's Magazine</u> . No mention was made of those planning to build or buy.	<u>Bedrooms</u>	
		1	Percent (of 16,021) 1.8
		2	34.4
		3	56.4
		more	8.1
(13) <u>"Public's Blueprint of Kind of Home it Wants", Practical Builder, pp. 135-137, Oct. 1950.</u>	Thousands of questionnaires were mailed but no mention was made as to the exact number. 96.5% plan to build, 2.5% plan to buy, and 2.5% plan to remodel. 51% are going to build in 6 months, 12% in 7 months to a year, 20% in 1 to 3 years, and 5% in 3-5 years.	<u>Bedrooms</u>	
		1	Percent 6
		2	24
		3	55
		4	11
		5	5

TABLE 24. NUMBER OF BEDROOMS WANTED (Contd.)

Survey	Sample	Findings			
(27) <u>The New House Next</u> <u>Door</u> , Better Homes and Gardens, Des Moines, Ia. 1950.	1,960 questionnaires were mailed to families who plan to build new homes. 1,416 questionnaires were returned (72%).	Number of bedrooms			
		<u>Cost of House</u>	<u>1</u>	<u>2</u>	<u>3</u>
					<u>4 or</u>
					<u>more</u>
		Under \$7,500	11%	66%	19%
		\$7,500-\$9,999	1	69	38
		\$10,000-\$14,999	3	55	35
		\$15,000-\$19,999	2	37	47
		\$20,000 and over	1	28	47
		All homes	3	51	39

Bedroom Size Preference--Analysis

The 10' x 15' bedroom is first in popularity for both the "master" bedroom and the "regular" bedroom. (See Chart XIV and Table 25.) The next preferred size for the "master" bedroom is 12' x 18". The 9' x 12' is the second preferred size for the "regular" bedroom.

Generally speaking, about four-tenths of the surveyees want the "master" bedroom to be 12' x 18'; three-tenths want it to be 10' x 15'; one-tenth want it larger than 12' x 18'; one-tenth want it, 9' x 12'; and a very small per cent want it, 7' x 9'.

With respect to the "regular" bedroom, about five-tenths want it to be 10' x 15'; four-tenths want it, 9' x 12'; one-tenth want it, 12' x 18'; a few want it to be larger than 12' x 18', but none want it, 7' x 9'.

The Wilson and Wells survey measured the popularity of nine different combinations of room sizes from 9' x 12' to 12' x 16'. In this study, by far the most popular size was the 12' x 14'. Second in popularity was the 10' x 12'; third was 12' x 12'.

SURVEY NO →
 YEAR →
 SAMPLE SIZE →
 ROOM
 SIZE ↓

9
 1946
 1837

15
 1946
 1935

16
 1946
 1970

7' x 9'

2% 0% 2%

9' x 12'

37% 7% 38% 4% 37%

10' x 15'

34% 45% 38% 43% 33% 48%

12' x 18'

46% 28% 10% 41% 7%

LARGER

9% 1% 7% 2%



MASTER BEDROOM

REGULAR BEDROOM

CHART XIV
 PREFERRED BEDROOM SIZES

TABLE 25. SIZE OF THE BEDROOMS

Survey	Sample	Findings	
(39) Wilson, M., and Wells, L., <u>Housing Planning Ideas of Oregon Rural Women</u> , Oregon Agriculture Experiment Station, Bulletin 369, 1940.	A survey of 450 Oregon homemakers. 60% lived on farms and the rest in villages and suburban areas. No measurement was made of these planning to build or buy.	<u>Dimensions wanted in own bedroom</u>	
		12' x 14'	Percent 31.9
		10' x 12'	14.0
		12' x 12'	11.5
		12' x 15'	7.6
		14' x 16'	6.5
		12' x 16'	5.7
		10' x 14'	4.0
		14' x 14'	3.3
		9' x 12'	2.4
(9) Collier's Families Report Their Housing Plans for Tomorrow, Grewell-Collier Research Project, June 1946.	A questionnaire was mailed to 3,000 representative Collier reader families. 1,837 families (61%) answered. 16% will build and 10% will buy a home.	<u>Master bedroom</u>	
		12' x 18'	Percent 46
		10' x 15'	34
		7' x 9')	
		12' x 18')	20
		Larger)	
		<u>Regular bedroom</u>	
		10' x 15'	Percent 45
		9' x 12'	37
		7' x 9')	
		12' x 18')	18
		Larger)	

TABLE 25. SIZE OF THE BEDROOMS (Contd.)

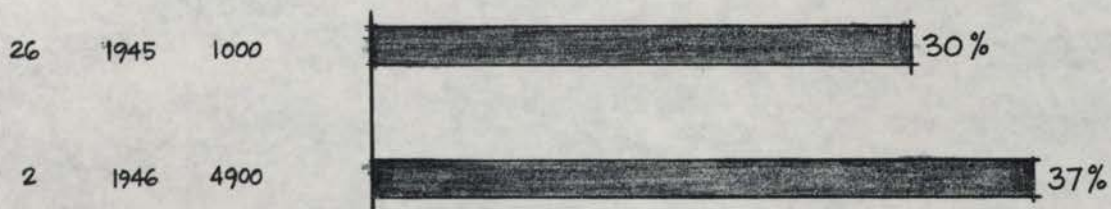
Survey	Sample	Findings	
(15) <u>Houses</u> , <u>Woman's Home Companion</u> , Crowell-Collier Pub. Co., New York, N. Y., May 1946.	A survey of <u>Woman's Home Companion</u> readers. 1,935 answered a mail questionnaire (65% returns). 16% will build and 9% will buy a new house in the next 2 years.	<u>Preferred Size of Master Bedroom:</u>	
		No answer	Percent 18
		9' x 12'	7
		10' x 15'	38
		12' x 18'	28
		larger	9
		<u>Preferred Size of Regular Bedrooms:</u>	
		No answer	Percent 6
		7' x 9'	2
		9' x 12'	38
(16) <u>Housing Plans of Families</u> , <u>The American Magazine</u> , Crowell-Collier Publishing Co., New York, N. Y., June 1946.	A survey of readers of <u>The American Magazine</u> . 1,970 answered a mail questionnaire (66% returns). 27% intend to buy or build a new home.	<u>Master Bedroom</u>	
		7' x 9'	Percent 0
		9' x 12'	4
		10' x 15'	33
		12' x 18'	41
		Larger	7
		Don't know	15
		<u>Regular Bedroom</u>	
		7' x 9'	Percent 2
		9' x 12'	37
		10' x 15'	43
		12' x 18'	7
		Larger	2
		Don't know	4

Use of the Bedrooms—Analysis

One survey (No. 4) determined that the bedroom was used for a wide variety of activities. (See Chart XV and Table 26.) Both a public-housing survey (No. 20) and a magazine survey (No. 2) found that the bedrooms were used most by the children for study and play (activities other than sleeping).

SURVEY NO.	YEAR	SAMPLE SIZE
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CHILDREN'S STUDY



CHILDREN'S PLAY

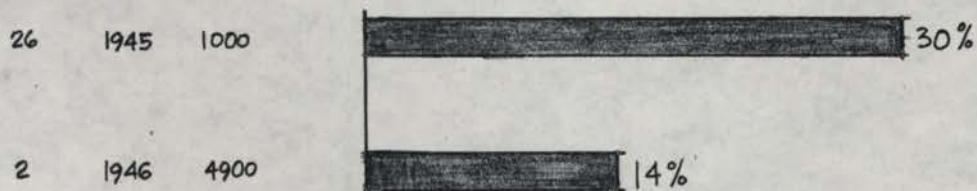


CHART XV
USE OF THE BEDROOMS FOR STUDYING AND PLAYING

TABLE 26. DAYTIME USE OF THE BEDROOM

Survey	Sample	Findings	
(4) Blum, Milton and Beatrice Candee, <u>Family Behavior, Attitudes and Possessions</u> , Research Study 5, John B. Pierce Foundation, 1944.	A survey of 65 families living in apartment buildings, and 66 families living in one-family houses. No measurement was made of those planning to build or buy.	<u>Times mentioned</u>	
		Sewing	29
		Reading	28
		Conversing	18
		Writing	15
		Radio listening	15
		Study	10
		Group gatherings	7
		Writing	3
(26) <u>The Livability Problems of 1,000 Families</u> , National Housing Agency, FPHA, 1945.	A survey of 1,062 families living in low-cost public housing. No measurement was made of those planning to build or buy.	Childrens recreation (of families with children)	46%
		Childrens study (of families with children)	30
		Sewing	25
		Ironing	6
(2) <u>Behind the Blueprints</u> , Better Homes and Gardens, Meredith Pub. Co., Des Moines, Ia., 1946.	A survey of 4,900 families who definitely plan to build a new home. Questionnaires were mailed and 42% were returned.	<u>Usually</u> <u>Sometimes</u> <u>Used Room</u> <u>Used Room</u>	
		Children study	37% 15%
		Children play	14 10

General Complaints About Bedrooms

The most frequent tenant complaints about the bedroom, according to a public-housing survey (No. 26), were:

1. Area too small.
2. Width too narrow.
3. Location requires passage through the main living-room area.
4. Location of doors, windows, and closets prevent desirable bed locations.
5. Inadequate window area or window location for necessary ventilation, particularly in southern areas.¹

Incidentally, this survey also determined that 52 per cent wanted double beds; 25 per cent, twin beds; and 23 per cent, single beds only.

Bedrooms in Public-Housing Units

One survey (No. 8) recommended that bedrooms be designed for multiple use: "Bedrooms, too often suitable only for sleeping, would be more effective if also useful for:

1. Quiet space for homework or hobbies, for both adults and children.
2. Secondary living-room space where club-age boys and girls can discuss their own affairs with their own friends."²

Other recommendations for bedrooms in public-housing units made as a result of Survey 19 were:

1. Allow free space beyond the limits of door swings.
2. Don't destroy good wall spaces by radiator locations.
3. Consider location of the closets with respect to furniture.
4. Allow space for the crib away from traffic.
5. Remember that locating beds too near or facing directly toward windows is objectionable.
6. Place window sills of first-floor bedrooms above outdoor eye-level if possible.³

¹Livability Problems of 1,000 Families, NHA, FPHA, 1945, p. 43.

²Coit, Elizabeth, "Housing From the Tenant's Viewpoint," Architectural Record, April 1942, pp. 71-84.

³Public Housing Design, NHA, FPHA, June 1946, p. 106.

Comments and Evaluation (Bedrooms)

In one of the more careful studies on bedrooms,¹ the Small Homes Council has established the following sizes for bedrooms based on furniture and necessary clearances. The smallest single bedroom requires 8' x 10' plus an additional 8 square feet for drawer space. The smallest double bedroom requires 10' x 12'. The smallest twin bedroom should be 10' x 14' or 12' x 12'. These rooms are based on single or twin beds 6'-10" long and 3'-6" wide, and double beds of the same length but 4'-6" wide. A 2-foot clearance on at least one side of the bed and at the foot is necessary; this should be increased to 3 feet where dressers or desks are adjacent to the bed.

On the basis of the above recommendations, a series of bedrooms were developed.² Most of these bedrooms are above minimum size. The single bedrooms have floor space for a desk, chair and chest in addition to the bed. Double and twin bedrooms have space for at least one chest of drawers--usually two, or a chest of drawers and a desk.

From this study, it would appear that the 7' x 9' choice for a master bedroom (Table 25, Surveys 9, 15 and 16) was without reason. The surveys failed to define "master" and "regular" bedrooms and to specify the bed size requirements for each.

¹Contemporary Houses Developed from Room Units, Small Homes Council, University of Illinois, 1951, pp. 16-21.

²Ibid., p. 16.

BATHROOM

Number of Bathrooms Preferred—Analysis

All of the surveys that measured the demand for both one and two bathrooms revealed that the one-bathroom house is preferred about twice as often as the two-bathroom house. (See Chart XVI and Table 27.) There is a trend toward houses with one bathroom and away from houses with two bathrooms. The demand for three bathrooms is steady, but light.

When the number of bathrooms wanted is related to money to be spent on the home (Surveys 23, 2 and 27), however, the situation changes a great deal. There is a close relationship between the cost of the new home and the number of bathrooms wanted. A large majority building houses that fall within the high-price range want two (or more) bathrooms.

Roughly speaking, about six-tenths of the surveyees want one bathroom, and four-tenths want two bathrooms.

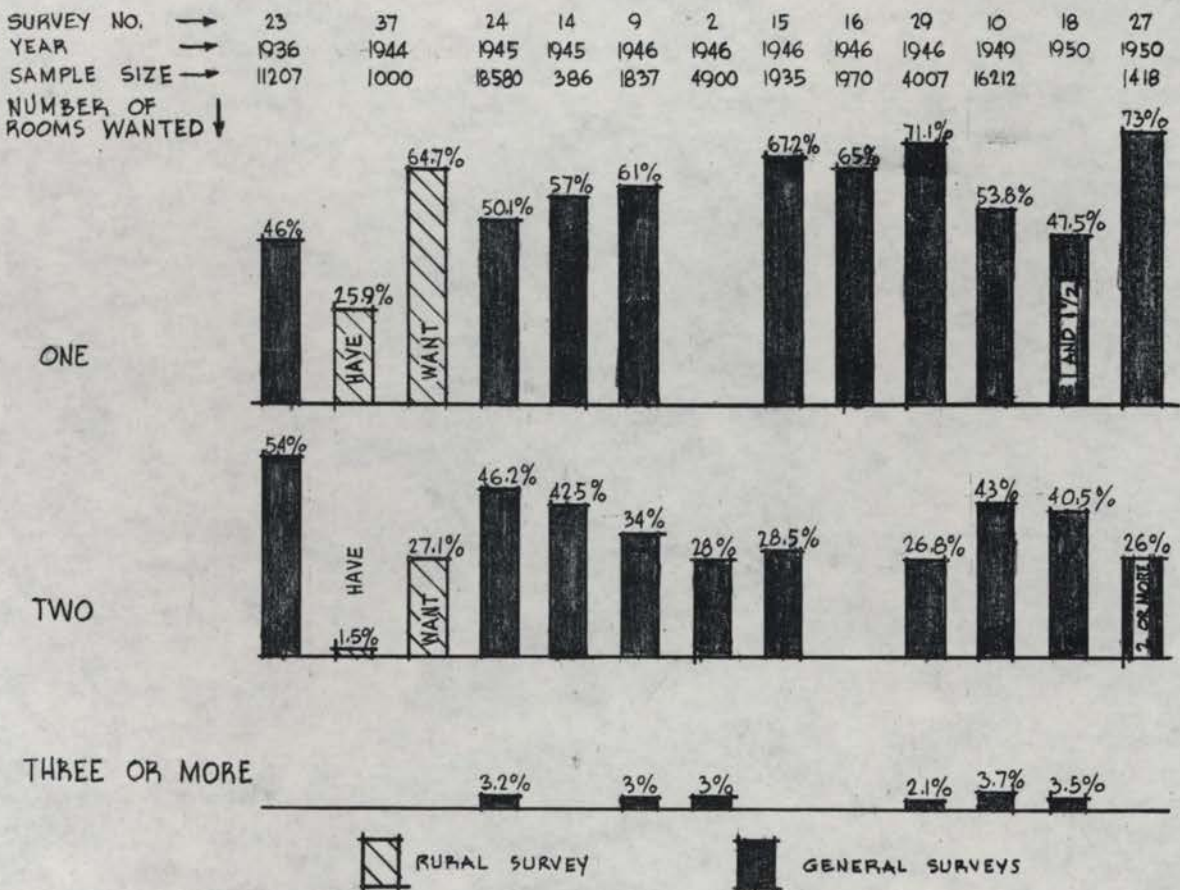


CHART XVI
NUMBER OF BATHROOMS WANTED

TABLE 27. NUMBER OF BATHROOMS

Survey	Sample	Findings		
(23) "Small House Preview", <u>Architectural Forum</u> , pp. 406-420, Nov. 1936.	A mail survey of 11,207 families determining what people like. 21% may build within the next 2 years.	<u>No. of bathrooms wanted</u>		<u>Percent</u>
		1		46
		2 or more		54
		<u>No. of bathrooms wanted by money spent on home</u>	<u>Number wanting one bathroom</u>	<u>Number wanting two bathrooms</u>
		Not given	12.8%	17.6%
		Under \$5,000	68.7	25.8
		\$5,000 - \$6,000	59.3	8.7
		\$6,000 - \$7,000	50.3	44.3
		\$7,000 - \$8,500	37.9	58.4
		\$8,500 - \$10,000	24.1	72.7
		\$10,000 - \$15,000	9.3	90.3
		Above \$15,000	4.5	93.1
(37) <u>What a Thousand Farm Families are Going to do About Building</u> , <u>Successful Farming</u> , 1944.	A survey of readers of <u>Successful Farming</u> . 1,000 families planning to build or remodel answered a mail questionnaire.	<u>Bathrooms</u>	<u>Present Home</u>	<u>Postwar Home</u>
		1	25.9%	64.7%
		2 or more	1.5	27.1
(24) <u>The American Woman's Home of Tomorrow</u> , Part III, <u>The New House</u> , McCall Corp., New York, N. Y., 1945.	A survey of 18,580 <u>McCall's</u> sub- scriber families. 79.5% plan to build or buy a new house.	<u>Bathrooms</u>	<u>Percent</u>	
		1	50.1	
		2	46.2	
		3 or more	3.2	

TABLE 27. NUMBER OF BATHROOMS (Contd.)

Survey	Sample	Findings			
(14) <u>Home Owners Survey,</u> Better Homes and Gardens Research Div., Meredith Pub. Co., Des Moines, Ia., 1945.	A survey of 386 <u>Better Homes and Gardens</u> subscriber families who plan to build, buy, or remodel (7.72% returns).	<u>Bathrooms</u> 1 1½ 2 or more	<u>Build</u> 47.9% 5.4 46.7	<u>Buy</u> 69.0% 6.9 20.7	<u>Build or Buy</u> 50.9% 6.1 42.5
(9) <u>Collier's Families</u> <u>Report Their Housing</u> <u>Plans for Tomorrow.</u> Crowell-Collier Research Project, 1946.	Questionnaires were mailed to 3,000 representative <u>Collier</u> reader families. 1,837 families (61%) answered. 16% will build and 10% will buy a new home.	<u>Number of bathrooms wanted</u> 1 2 3 or more Undecided	<u>Percent</u> 61 34 3 2		
(2) <u>Behind the Blueprints,</u> Better Homes and Gardens, Meredith Pub. Co., Des Moines, Ia., 1946.	A survey of 4,900 families who definitely plan to build a new home. Questionnaires were mailed and 42% were returned.	<u>Number of bathrooms wanted</u> 2 3 or more	<u>Percent</u> 28 3		
		<u>No. of bathrooms wanted by money to be spent on house</u>	<u>Price</u>		
		1.1	Under \$5,000		
		1.2	\$5,000 - \$7,500		
		1.4	\$7,500 - \$10,000		
		1.7	\$10,000 - \$15,000		
		2.2	\$15,000 and over		
		1.3	All homes		

TABLE 27. NUMBER OF BATHROOMS (Contd.)

Survey	Sample	Findings	
(15) <u>Houses</u> , Woman's Home Companion, Crowell-Collier Pub. Co., New York, N. Y., 1946.	A survey of <u>Woman's Home Companion</u> readers. 1,935 answered a mail questionnaire (65% returns). 16% will build and 9% will buy a new house in the next two years.	Both build or buy:	
		<u>Bathrooms</u>	<u>Percent</u>
		1	67.2
		2	28.5
		Number of bathrooms wanted by families who expect to <u>build new homes</u>	<u>Percent</u>
		No answer	4
		1 bathroom	64
		2 bathrooms	31
		3 bathrooms	1
		Number of bathrooms wanted by families who expect to <u>buy new homes</u>	<u>Percent</u>
(16) <u>Housing Plans of Families</u> , The American Magazine, Crowell-Collier Pub. Co., New York, N. Y., 1946.	A survey of readers of <u>The American Magazine</u> . 1,970 answered a mail questionnaire (66% returns). 27% plan to buy or build a new home.	<u>Bathrooms</u>	<u>Percent</u>
		1	65
		1 bath & an extra lavatory	53
(29) <u>Urban Housing Survey</u> , Saturday Evening Post Research Dept., Curtis Pub. Co., Nov. 1946.	4,007 families in 35 states and 118 urban centers were interviewed. 50 to 60% of the interviews were with renters and 40 to 45% were with home owners. 34.3% expect to build or buy a house.	<u>Bathrooms</u>	<u>Percent</u>
		1	71.1
		2	26.8
		3 or more	2.1

TABLE 27. NUMBER OF BATHROOMS (Contd.)

Survey	Sample	Findings	
(10) <u>Collier's Housing Quiz</u> , <u>Colliers</u> , Jan. 1949.	A survey of 16,212 readers of <u>Collier's Magazine</u> . No mention was made of those planning to build or buy new homes.	<u>Bathrooms</u>	<u>Percent</u> (of 15,981)
		1	53.8
		2	43.0
		3	3.2
		more	0.5
(18) "Public's Blueprint of Kind of Home it Wants," <u>Practical Builder</u> , pp. 135-137, Oct. 1950.	Thousands of questionnaires were mailed but no mention was made as to the exact number. 96.5% plan to build, 2.5% plan to buy, and 2.5% plan to remodel. 51% are going to build in 6 months; 12% in 7 months to a year; 20% in 1-5 years; and 5% in 3-5 years.	<u>Bathrooms</u>	<u>Percent</u>
		1-1½	47.5
		2	40.5
		3	3.5
(27) <u>The New House Next Door</u> , <u>Better Homes and</u> <u>Gardens</u> , Des Moines, Ia., 1950.	1,960 questionnaires were mailed to families who plan to build new homes. 1,416 questionnaires were returned (72%).	Number of bathrooms by	
		<u>cost of new home:</u>	
		Under \$7,500	One bath 90% Two or more 5%
		\$7,500 - \$9,999	91 8
		\$10,000 - \$14,999	87 13
		\$15,000 - \$19,999	63 37
		\$20,000 and over	30 70
		All homes	73 26

Half-Baths, Powder Rooms, and Toilet Compartments--Analysis

Surveys concerned with extra lavatories (half-baths) show that roughly four-tenths of the families want an extra lavatory. (See Chart XVII and Table 28.)

There is a close relationship between the cost of the house and the demand for half-baths, with the higher-priced homes including plans for half-baths or extra lavatories. This is shown by Surveys 2 and 27. The first survey (No. 2) also found that an extra lavatory was wanted more often by families with children. In addition, it was found (See Table 29, Survey 2) that plans for the more expensive homes included separate toilet compartments more often than the less costly houses. The demand for a separate toilet compartment is slightly greater in cities.

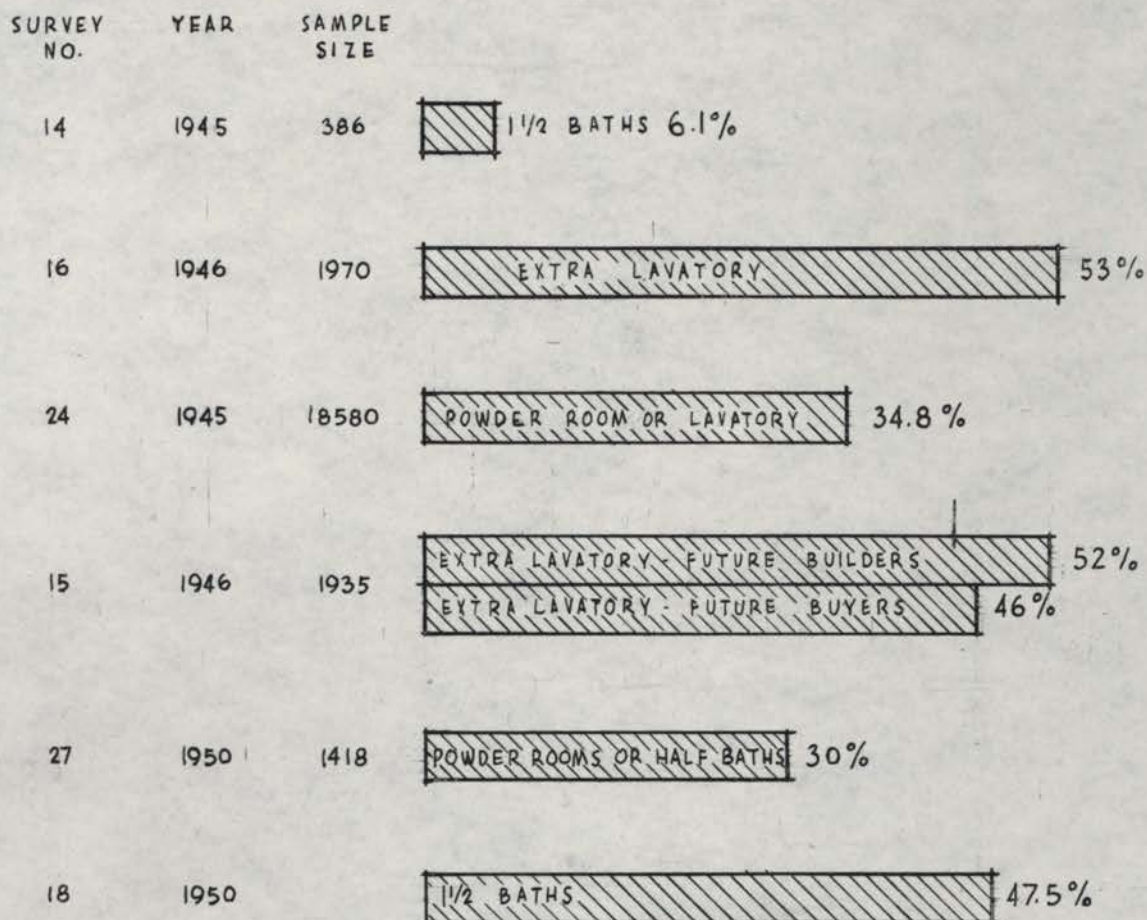


CHART XVII
DEMAND FOR HALF-BATHS, POWDER ROOMS, OR EXTRA LAVATORIES

TABLE 28. HALF-BATHS, POWDER ROOMS OR EXTRA LAVATORIES*

Survey	Sample	Findings			
(14) <u>Home Owners Survey</u> , Better Homes and Gardens Research Div. Meredith Pub. Co., Des Moines, Ia., 1945.	A survey of 386 <u>Better Homes and Gardens</u> subscriber families who plan to build, buy or remodel (7.72% returns).	<u>Bathrooms</u> 1½	<u>Build</u> 5.4%	<u>Buy</u> 6.9%	<u>Build or Buy</u> 6.1%
(24) <u>The American Woman's Home of Tomorrow</u> , Part III, <u>The New House</u> , McCall Corp., New York, N. Y., June 1945.	A survey of 18,580 <u>McCall's</u> sub- scriber families. 79.5% plan to build or buy a new house.	Powder room or lavatory			<u>Percent</u> 34.8
(16) <u>Housing Plans of Families</u> , The American Magazine, Crowell-Collier Pub. Co., New York, N.Y., 1946.	A survey of readers of <u>The American Magazine</u> . 1,970 answered a mail questionnaire (66% returns). 27% plan to buy or build a new home.	<u>Bathrooms</u> 1 bath and an extra lavatory	<u>Percent</u> 53		
(2) <u>Behind the Blueprints</u> , Better Homes and Gardens, Meredith Pub. Co., Des Moines, Ia., 1946.	A survey of 4,900 families who definitely plan to build a new house. Questionnaires were mailed and 42% were returned.	Two or dual washbasins by cost of house:			
		Under \$5,000	6%		
		\$5,000 - \$7,500	10		
		\$7,500 - \$10,000	12		
		\$10,000 - \$15,000	12		
		\$15,000 and over	16		

* Surveys do not make it clear as to whether or not "Lavatory" refers to a wash basin only or a half-bath.

TABLE 28. HALF-BATHS, POWDER ROOMS, OR EXTRA LAVATORIES (Contd.)

Survey	Sample	Findings		
(15) <u>Houses</u> , Woman's Home Companion, Crowell-Collier Pub. Co., New York, N. Y., May 1946.	A survey of <u>Woman's Home Companion</u> readers. 1,935 answered a mail questionnaire (65% returns). 16% will build and 9% will buy a new home in the next 2 years.	Number of extra lavatories planned: <u>Future Builders</u> No answer None 1 2	<u>Percent</u> 39 6 52 3	
		<u>Future Buyers</u> No answer None One Two Three	<u>Percent</u> 34 12 46 7 1	
(27) <u>The New House Next Door</u> , Better Homes and Gardens, Des Moines, Ia., 1950.	1,960 questionnaires were mailed to families who plan to build new homes. 1,416 questionnaires were returned (72%).	Powder-rooms or half baths by cost of house: Under \$7,500 \$7,500 - \$9,999 \$10,000 - \$14,999 \$15,000 - \$20,000 \$20,000 and over All	<u>One</u> 6% 16 29 44 46 30	<u>One or more</u> 0% 0 2 1 8 2
(18) "Public's Blueprint of Kind of House it Wants," <u>Practical Builder</u> , pp. 135-137, Oct. 1950.	"Thousands of questionnaires were mailed" but no mention was made as to the exact number. 96.5% plan to build, 2.5% plan to buy, and 2.5% plan to remodel. 51% are going to build in 6 months, 12% in 7 months to a year, 20% in 1-5 years, and 5% in 3-5 years.	<u>Bathrooms</u> 1½	<u>Percent</u> 47.5	

Bathing Preferences—Analysis

Surveys indicate that the combination tub-and-shower is most popular (Chart XVIII and Table 29); separate tub and a shower are next in popularity. The demand for only a shower stall or only a tub is light, but about equal. In general, about six-tenths of the families want a combination tub-and-shower arrangement; three-tenths want a separate tub and a shower. Very few want only a tub or only a shower.

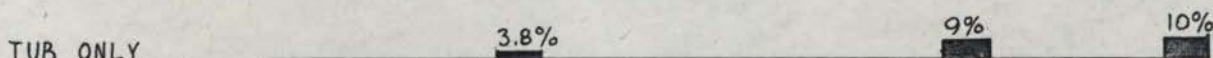
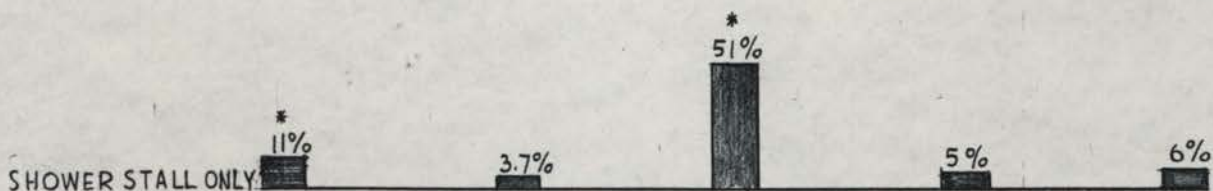
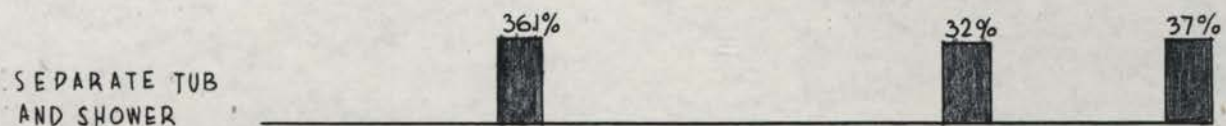
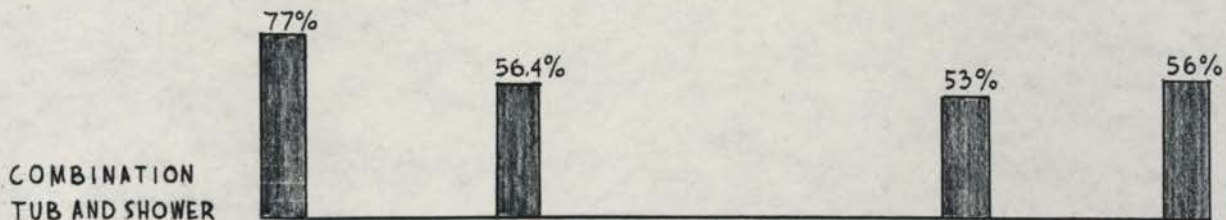
A public-housing survey (No. 19) indicated that, in general, women preferred tub baths and men preferred showers. "Women like tubs—men like showers. A shower over tub would be a good thing."¹ Another survey (No. 32) showed that women wanted tubs for both themselves and their children. The increasing acceptance of the shower was shown by another survey. "In 1936, 85 per cent preferred a tub only. (In the 1948 survey, 18 per cent of this same group wanted a tub only.) This indicates a change in standards since admittance to public housing."²

One survey (No. 2) indicated that the shower stall was popular among young families. This survey also indicated that the more expensive houses "will have a shower stall more often"—presumably this meant in addition to a tub.

¹Public Housing Design, NHA, FPHA, p. 107.

²Friedman, Beatrice, Better Housing for the Family, Women's City Club, New York, 1948, p. 22.

SURVEY NO. →	23	24	2	15	16
YEAR →	1936	1945	1946	1946	1946
SAMPLE SIZE →	11207	18580	4900	1935	1970



* NOT CLEAR AS TO MEANING - MAY NOT BE SHOWER STALL ONLY

CHART XVIII
BATHING FACILITIES WANTED

TABLE 29. BATHROOM FEATURES WANTED

Survey	Sample	Findings			
(23) "Small House Preview," <u>Architectural Forum</u> , Nov. 1936.	A mail survey of 11,207 families determining what people like. 21% may build within the next 2 years.	Type of shower wanted:	Percent		
		No shower	12		
		Tub shower	77		
		Stall shower	11		
		Type of shower wanted by price to be spent on house:	No shower	Tub shower	Stall shower
			(of 11,207 families)		
		Under \$5,000	17.0%	70.2%	9.7%
		\$5,000 - \$6,000	10.3	69.7	8.8
		\$6,000 - \$7,000	8.4	68.9	7.9
		\$7,000 - \$8,500	9.5	76.9	10.3
(24) <u>The American Woman's</u> <u>Home of Tomorrow</u> , Part III, <u>The New House</u> , McCall Corp., New York, N.Y., June 1945.	A survey of 18,580 <u>McCall's</u> subscriber families. 79.5% plan to build or buy a new house.	\$8,500 - \$10,000	8.6	60.2	8.5
		\$10,000 - \$15,000	6.8	49.3	8.2
		Above \$15,000	5.9	56.4	8.9
		Tub with shower	56.4		
		Separate shower compart- ment and tub	36.1		
		Tub only	3.8		
		Shower only	3.7		
		Bath and toilet compartments	56.6		
		Standard bathroom	43.4		

TABLE 29. BATHROOM FEATURES WANTED (Contd.)

Survey	Sample	Findings	
(15) <u>Houses, Woman's Home Companion, Crowell-Collier Pub. Co., New York, N.Y., May 1946.</u>	A survey of <u>Woman's Home Companion</u> readers. 1,935 answered a mail questionnaire (65% returns). 16% will build and 9% will buy a new home in the next 2 years.	Bathing facilities planned by future builders	<u>Percent</u>
		Undecided	1
		Bath tub and stall	
		shower separate	32
		Shower stall only	5
		Tub only	9
(16) <u>Housing Plans of Families, The American Magazine, Crowell-Collier Pub. Co., New York, N.Y., June 1946.</u>	A survey of readers of <u>The American Magazine</u> . 1,970 answered a mail questionnaire (66% returns). 27% of this group intend to buy or build new homes.	Combination tub and shower	<u>Percent</u>
		Bath tub and stall	56
		shower separate	37
		Tub only	10
		Shower only	6

TABLE 29. BATHROOM FEATURES WANTED (Contd.)

Survey	Sample	Findings	
(2) <u>Behind the Blueprints</u> , Better Homes and Gardens, Meredith Pub. Co., Des Moines, Ia., 1946.	A survey of 4,900 families who definitely plan to build a new house. Questionnaires were mailed and 42% were returned.	<u>Shower stall demand</u> <u>by cost of the house</u>	
			<u>Percent</u>
		Under \$5,000	45
		\$5,000 - \$7,500	56
		\$7,500 - \$10,000	61
		\$10,000 - \$15,000	61
		\$15,000 and over	4
		All houses	51
		<u>Other features by</u> <u>cost of house</u>	<u>Toilet separate</u> <u>for privacy</u>
		Under \$5,000	22%
		\$5,000 - \$7,500	27
		\$7,500 - \$10,000	33
		\$10,000 - \$15,000	31
		\$15,000 and over	34

Use of the Bathroom--Analysis

Few statistics are available as to the use of the bathroom. Only one survey measured activities performed in the bathroom. (See Table 30.)

Another survey concluded that the bathroom was often called upon to relieve the over-used kitchen, especially for laundry work, and might well be arranged and equipped for light laundering.¹

¹Coit, op. cit., pp. 71-84.

TABLE 30. USE OF THE BATHROOM

Survey	Sample	Findings	
(4) Blum, Milton, and Candee, Beatrice, <u>Family Behavior, Attitudes and Possessions</u> , Research Study 5, John B. Pierce Foundation, 1944.	A survey of 65 families living in apartment buildings, and 66 families living in one-family houses. No measurement was made of those planning to build or buy.		<u>Times Mentioned</u>
		Brushing teeth	287
		Bath	218
		Combing hair	213
		Shower	145
		Dressing	107
		Shaving	88
		Makeup	49

General Complaints About Bathrooms

The major objections to bathrooms recorded in a public-housing survey (No. 26) were:

1. Areas too small (25 per cent were less than 32 square feet).
2. No lavatories, or lavatories inadequately designed.
3. No shelving and no, or an insufficient number of, towel racks.
4. No medicine cabinet, or medicine cabinet too small.
5. Pull cords instead of wall switches.

Another survey (No. 4) revealed a somewhat different set of complaints, as shown in Table 31.

TABLE 31. PET PEEVES ABOUT BATHROOMS

	Group A (65 families in apartments)	Group H (66 families in houses)
Too small (4'-10" x 6'-8")	29%	58%
Untiled walls	38	8
Layout poor	0	6
Noisy	6	0
Window over tub	8	5
Tub or basin too small	6	2
One toilet insufficient	5	0
Poor plumbing	0	5
Lack of towel space	0	6

It is significant that only 29 per cent of the apartment group regarded the 4'-10" x 6'-8" bathroom as too small; whereas 58 per cent of the house group were dissatisfied with this same size bathroom. Difference in family stage between these two groups may be a factor. Children living in Group H were older than those living in Group A; however, Group A contained almost 50 per cent more children than Group H. This may also explain the greater concern by the Group A families over untiled walls.

Bathrooms in Public-Housing Units

As a result of Survey 26, recommendations set up for bathrooms in public-housing units were:

1. Areas should be a minimum of 32 square feet, preferably 35 square feet.
2. Five-bedroom units should be provided with an additional lavatory and toilet enclosed in an area separated from the bath.
3. Medicine cabinet should be at least 18" x 22" with a glass area 1' x 18".
4. A minimum of shelving 30" x 9" should be provided in all bathrooms in two-bedroom units and larger.
5. Strips should be provided for all bathrooms for tenant's supply of towel racks.
6. The design of the lavatory should be such as to permit the placement of glass and soap dish on the rim, unless holder¹ or open shelf under the medicine cabinet is provided.¹

Further recommendations established by another public-housing survey (No. 19) were:

"Adequate light and ventilation, preferably natural, are first considerations, and ready access to the window without having to bend over the tub is desirable; if, however, layout economy places the tub under the window, this should overrule the advantage of convenience. Placing the water-closet adjacent to the tub provides a handy seat for the mother drying small children. If the lavatory can be located where its users will not be struck by a swinging door, this will be appreciated; and a well-lighted space for the lavatory is also welcomed."²

This survey also indicated that experience in New York public housing showed that approaching the bath through the bedroom was bad, for it destroys the privacy of the bedroom.³

Comments and Evaluation

Minimum floor area, including required clearances, for a bathroom having the usual three fixtures is set at 32½ square feet; minimum area for units having a stall shower (instead of tub) and a corner lavatory is 25 square feet.⁴

¹Livability Problems of 1,000 Families, NHA, FPHA, p. 52.

²Public Housing Design, NHA, FPHA, p. 107.

³Ibid., p. 107.

⁴"Planning Units for Service Requirements," Architectural Forum, June 1939, p. 106.

The space requirements for the bathroom, 32 to 35 square feet, suggested by the public-housing survey (No. 26) are adequate minimum requirements for the three-fixture units. There is no space left, however, for items found in the typical bathroom, such as clothes hamper, bathinette, etc. An area of about 40 square feet should be provided for a bathroom so equipped.

BASEMENT--UTILITY SPACE

Basement vs. Utility Room--Analysis

No sharp line can be drawn between the demand for a basement and the demand for a utility room. Most surveys do not describe the utility room, but leave the interpretation up to the surveyee. The popular interpretation appears to be a room for laundry usually on the first floor. (The rural population expands the use of this room considerably.) Most of the surveys show that some people want both a basement and a utility room. As noted above, the location of the desired utility room is not always certain--it may be in the basement but it is more likely to be on the first floor (Chart XIX and Table 32).

Generally speaking, about seven-tenths of the surveyees want basements, while about four-tenths want utility rooms.

Regardless of the great demand for a basement: "Full basements were provided in only an estimated 36 per cent of the single-family detached houses built during the first half of 1950. Virtually all the rest had no basements, showing the shift toward crawl-space and slab-on-grade construction. The 1940 FHA analysis showed slightly more than half of single detached houses built at that time had basements."¹

Basement demand is strongly tied to regional preferences. Had all of the surveys concerned with basement demand made a geographic breakdown, these data would be more helpful since those that do (Nos. 29 and 27) reveal significant regional differences. Survey 27, which had all areas of the United States represented, showed that the basement demand varied from 98 per cent in the New England area to 8 per cent in the "West South Central," with the demand decreasing progressively as one traveled from east to south and west. Another nation-wide survey, conducted by the Housing and Home Finance Agency, furnished supportive evidence "...of the total single-family residences built during the first half of 1950, practically all those in Florida were basementless. This type of house was prevalent also across the South from Louisiana through Texas and up through the Rocky Mountain states. Houses with basements were concentrated primarily in the Northeast, North Central, and Midwest states."² Comparison of Surveys Nos. 39 and 37 with the rest of the surveys indicates that farm families want basements more often than urban families do.

¹Surveying Materials Used in House Construction, Housing and Home Finance Agency news release, Washington 25, D. C., July 18, 1951. Unpaged.

²Ibid.

SURVEY NO.	39	37	24	14	29	16	9	36	2	15	10	27	18	12
YEAR	1940	1944	1945	1945	1946	1946	1946	1946	1946	1946	1949	1950	1950	1951
SAMPLE SIZE	450	1000	18580	386	4007	1970	1837	3518	4900	1935	16212	1418		439

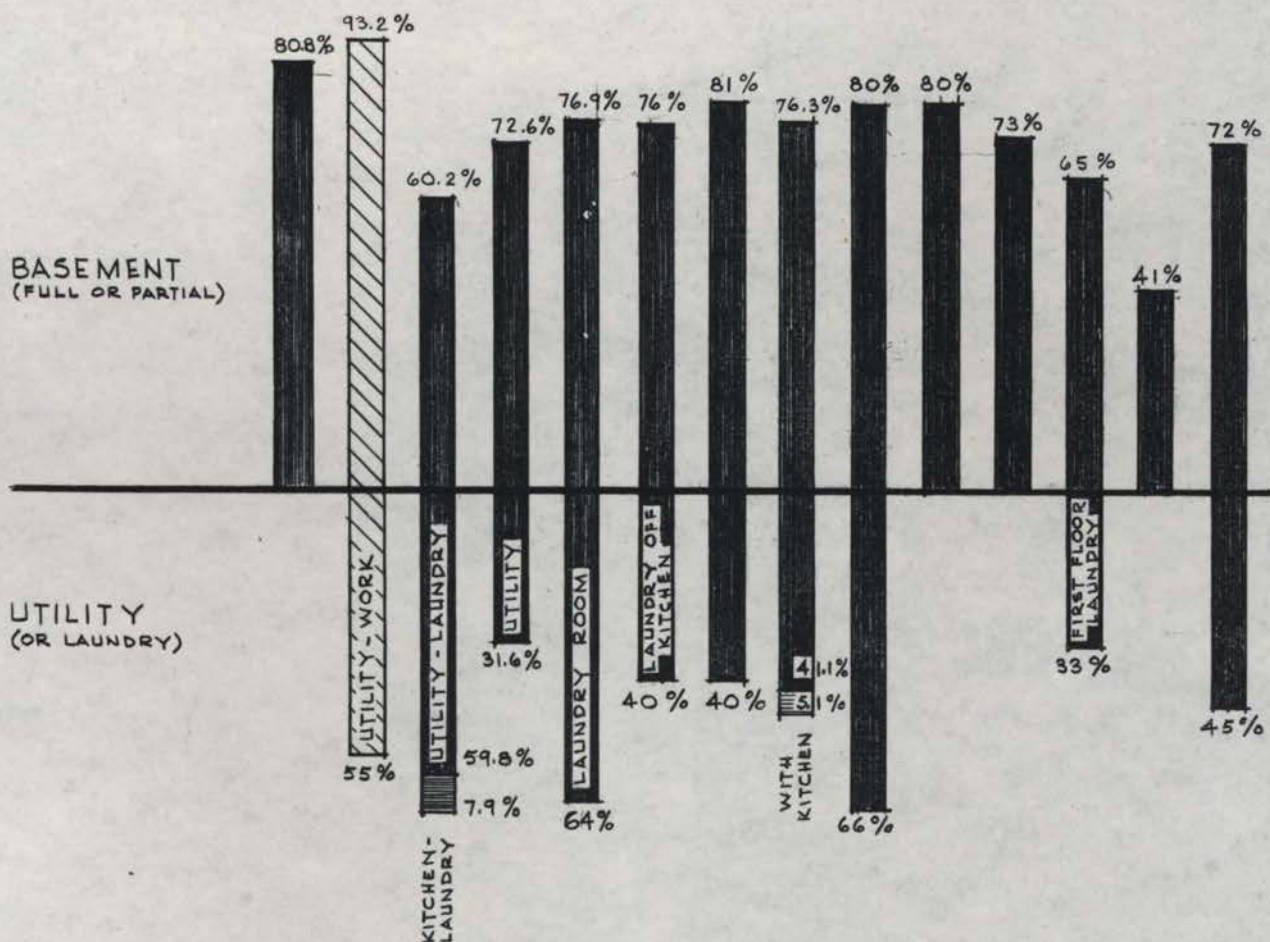


CHART XIX
BASEMENT DEMAND
WITH COMPARATIVE UTILITY ROOM DEMAND

TABLE 32. BASEMENT AND UTILITY ROOM DEMAND

Survey	Sample	Findings			
(39) Wilson, M., and Wells, L., <u>House Planning Ideas of Oregon Rural Women</u> , 1940.	A survey of 450 Oregon homemakers. 60% lived on farms and the rest in villages and suburban areas. No measurement was made of those planning to build or buy new homes.	1 story and basement 1 story and no basement 2 story and basement 2 story and no basement	43.1% 9.7 37.7 9.5		
(37) <u>What a Thousand Farm Families are Going to do About Building</u> , <u>Successful Farming</u> , 1944.	A survey of readers of <u>Successful Farming</u> . 1,000 families planning to build or remodel answered a mail questionnaire.	Basement Full Half None No answer or Don't know Utility Room	Present Home 21.4% 40.0 31.8 6.8 17.2	Postwar Home 82.0% 11.2 4.6 2.2 55.5	
(24) <u>The American Woman's Home of Tomorrow</u> , Part III, <u>The New House</u> , McCall Corp., New York, N.Y., 1945.	A survey of 18,580 <u>McCall's</u> subscriber families. 79.5% plan to build or buy a new home.	Basement Utility-laundry room Kitchen-laundry	60.2% 59.8 7.9		
(14) <u>Home Owner's Survey</u> , <u>Better Homes and Gardens Research Division</u> , Meredith Pub. Co., Des Moines, Ia., 1945.	A survey of 386 <u>Better Homes and Gardens</u> subscriber families who plan to build, buy or remodel. 77.2% returns.	Basement 1st. floor utility	Build 73.1%	Buy 75.9%	Build or Buy 72.6% 31.6

TABLE 32. BASEMENT AND UTILITY ROOM DEMAND (Contd.)

Survey	Sample	Findings		
(29) <u>Urban Housing Survey</u> , Saturday Evening Post Research Dept., Curtis Pub. Co., 1946.	4,007 families in 35 states and 118 urban centers were interviewed. 50 to 60% of the interviews were with renters and 40 to 45% were with home owners. 34.3% expect to build or buy a home.		Desirable but not Necessary	Not Necessary
		Basement		
		All builders	76.9%	9.7%
		Northeast	94.1	3.8
		North Central	86.0	7.8
		South	43.0	19.0
				38.0
		Laundry Room		
		All builders	64.0	20.1
		Northeast	61.0	23.6
		North Central	69.7	15.0
		South	56.2	26.6
		West	72.0	15.8
				12.3
(16) <u>Housing Plans of Families</u> , Crowell- Collier Pub. Co., New York, N.Y., 1946.	A survey of readers of <u>The American Magazine</u> . 1,970 answered a mail questionnaire (66% returns) 27% intend to build or buy new homes.	Basement planned		76%
		Laundry room		93
		Basement	49%	
		Off kitchen	40	
(9) <u>Collier's Families Report Their Housing Plans for Tomorrow</u> Crowell-Collier Research Project, 1946.	A questionnaire was mailed to 3,000 representative <u>Collier</u> reader families. 1,837 families (61%) answered. 16% will build and 10% will buy a house.	Basement		83%
		Laundry room		93
		Basement	53%	
		Off kitchen	40	

TABLE 32. BASEMENT AND UTILITY ROOM DEMAND (Contd.)

Survey	Sample	Findings		
(36) <u>What Kind of Homes Do Families With Children Want?</u> Parent's Magazine Home Building Study, 1946.	A survey of readers (with children) of <u>Parents' Magazine</u> . 3,653 families answered a mail questionnaire (26.5% returns). 71.4% plan to build or buy a new home.	Basement	76.3%	
		Build	76.8%	
		Buy	81.8	
		Remodel	76.3	
		Laundry room	85.3	
		Basement	46.0%	
		Utility room	41.1	
		Combined with kitchen	5.1	
		In or near garage	2.3	
		Other or don't know	5.0	
(2) <u>Behind the Blueprints.</u> Better Homes and Gardens, Meredith Pub. Co., Des Moines, Ia., 1946.	A survey of 4,900 families who definitely plan to build a new home. Questionnaires were mailed and 42% were returned.	Basement	<u>Present</u>	<u>Future</u>
		Full	66%	66%
		Half	14	14
		None	19	13
		Don't know	1	7
		(Laundry room in basement 74% of above)		
		Utility room with provisions for		
		Washing machine	66%	
		General storage	56	
		Ironer	50	
		Sewing machine	44	
		Canning or freezing	35	
		Recreation or hobbies	33	
		Home freezer	33	
		Clothes dryer	28	

TABLE 32. BASEMENT AND UTILITY ROOM DEMAND (Contd.)

Survey	Sample	Findings
(15) <u>Housing, Woman's Home Companion, Crowell-Collier Pub. Co., New York, N.Y., May 1946.</u>	A survey of <u>Woman's Home Companion</u> readers. 1,935 answered a mail questionnaire (65% returns). 16% will build and 9% will buy a new house in the next two years.	Plan to have basement 80% Do not 18 Undecided 2
(41) <u>1947 Buying Requirements of Illinois and Indiana Farm Families, Research Department, Prairie Farmer, Chicago, Illinois, 1947.</u>	A survey of <u>Prairie Farmer</u> reader families. 2,400 questionnaires were sent out and 583 were returned (23.3% returns).	Of those planning to remodel (39%): 12% will add or modernize the basement 6 will add or modernize the utility room
(10*) <u>Collier's Housing Quiz, Colliers, Jan. 22, 1949.</u>	A survey of 16,212 readers of <u>Collier's Magazine</u> . No mention was made of those planning to build or buy.	Basement wanted 73%
(18) <u>"Public's Blueprint of Kind of Home it Wants", Practical Builder, pp. 135-137, Oct. 1950.</u>	Thousands of questionnaires were mailed but no mention was made as to the exact number. 96.5% plan to build, 2.5% plan to buy, and 2.5% plan to remodel. 51% are building in 6 months, 12% in 7 months to a year, 20% in 1-3 years, and 5% in 3-5 years.	Basement wanted 43%

TABLE 32. BASEMENT AND UTILITY ROOM DEMAND (Contd.)

Survey	Sample	Findings		
(27) <u>The New House Next Door</u> , Better Homes and Gardens, Des Moines, Ia., 1950.	1,960 questionnaires were mailed to families who plan to build new homes. 1,416 questionnaires were returned (72%).		<u>Full</u>	<u>Half</u> <u>Any</u>
		Basement		
		New England	92%	6% 98%
		Middle Atlantic	80	11 91
		W.N. Central	83	6 89
		E.N. Central	72	8 80
		E.S. Central	45	10 55
		S. Atlantic	27	22 49
		Mtn. and Pacific	17	17 34
		W.S. Central	—	8 8
		Total U.S.	53	12 65
		Laundry		
		Basement		52%
		1st floor		33

TABLE 32. BASEMENT AND UTILITY ROOM DEMAND (Contd.)

Survey	Sample	Findings	
(12) Ferber, R., and Wales, H., <u>Which: Utility Room or Basement?</u> University of Illinois, 1951.	An interview survey of 439 people in Champaign-Urbana.	Basement	72%
		By type of residence now living in:	
		Standard	70%
		Prefab	83
		Apartment unit	70
		Reason prefer basement:	
		More space	50%
		Better heating	8
		Other reasons	14
		Utility room	45%
		By type of residence now living in:	
		Standard	44%
		Prefab	38
		Apartment unit	59
		Reason prefer utility room:	
		Basement too expensive	6%
		Basement too damp	2
		Don't like stairs	10
		More convenient	8
		No worry about flooding	3
		Other reasons	16

Use of the Basement—Analysis

The surveys indicate that families want a basement primarily for doing the laundry. About five-tenths of the families want the basement largely for this purpose. (See Chart XX and Table 33.)

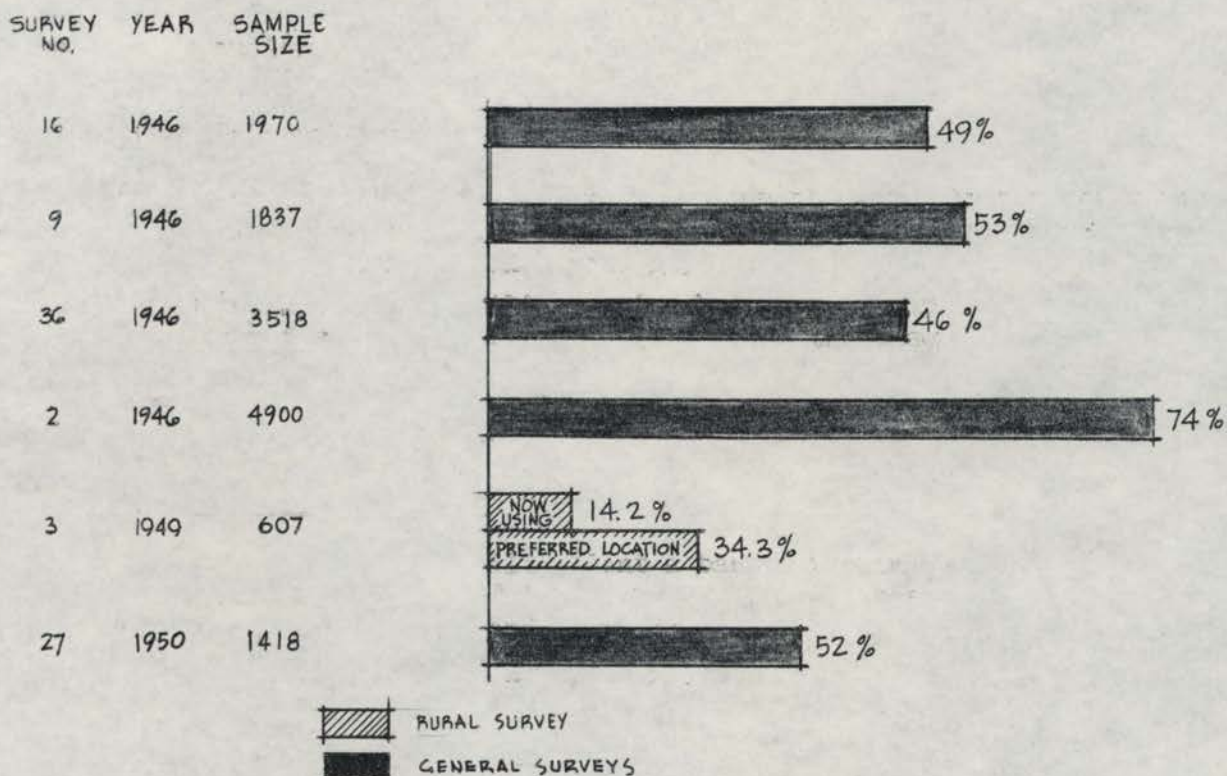


CHART XX
USE OF THE BASEMENT FOR LAUNDRY

TABLE 33. USE OF THE BASEMENT

Survey	Sample	Findings
(16) <u>Housing Plans of Families</u> , Crowell-Collier Pub. Co., New York, N. Y., 1946.	A survey of readers of <u>The American Magazine</u> . 1,970 answered a mail questionnaire (66% returns). 27% intend to build or buy new homes.	Basement laundry room planned 49%
(9) <u>Collier's Families Report Their Housing Plans for Tomorrow</u> , Crowell-Collier Research Project, 1946.	A questionnaire was mailed to 3,000 representative <u>Collier</u> reader families. 1,837 families (61%) answered. 16% will build and 10% will buy a house.	Basement laundry room planned 53% Basement playroom planned 61
(36) <u>What Kind of Homes Do Families With Children Want?</u> Parents' Magazine Home Building Study, 1946.	A survey of readers (with children) of <u>Parents' Magazine</u> . 3,653 families answered a mail questionnaire (26.5% returns). 71.4% plan to build or buy a new home.	Basement laundry room planned 46%

TABLE 33. USE OF THE BASEMENT (Contd.)

Survey	Sample	Findings																																			
(2) <u>Behind the Blueprints.</u> Better Homes and Gardens, Meredith Pub. Co., Des Moines, Ia., 1946.	A survey of 4,900 families who definitely plan to build a new home. Questionnaires were mailed and 42% were returned.	Basement laundry room planned 74%																																			
(3) <u>Beyers, Glenn, Farm</u> <u>Housing in the</u> <u>Northeast, Cornell</u> Univ. Press, Ithaca, New York, 1949.	A survey of 607 farm families in the Northeast. The interview- schedule method was used. No measurement was made of those plan- ning to build or buy.	Place laundry done: <table><tr><td></td><td>Families Now Using This Location</td><td>Families Preferring to use this Location</td></tr><tr><td>Basement</td><td>14.2%</td><td>34.3%</td></tr><tr><td>Workroom, Utility room or back room</td><td>9.1</td><td>12.8</td></tr></table> Preferred Use of the Basement: <table><tr><td>Storage of canned goods</td><td>92.6%</td></tr><tr><td>Washing and/or drying clothes</td><td>61.1</td></tr><tr><td>Heating and fuel storage</td><td>59.0</td></tr><tr><td>Storage of produce</td><td>59.6</td></tr><tr><td>Food processing</td><td>24.6</td></tr><tr><td>Place to wash up</td><td>18.3</td></tr><tr><td>Meat processing</td><td>17.0</td></tr><tr><td>Storage of meat, freezer, etc.</td><td>14.9</td></tr><tr><td>Workroom</td><td>4.9</td></tr><tr><td>Garage</td><td>1.2</td></tr><tr><td>Storage of clothing</td><td>0.9</td></tr><tr><td>General storage</td><td>11.7</td></tr><tr><td>Other</td><td>6.2</td></tr></table>		Families Now Using This Location	Families Preferring to use this Location	Basement	14.2%	34.3%	Workroom, Utility room or back room	9.1	12.8	Storage of canned goods	92.6%	Washing and/or drying clothes	61.1	Heating and fuel storage	59.0	Storage of produce	59.6	Food processing	24.6	Place to wash up	18.3	Meat processing	17.0	Storage of meat, freezer, etc.	14.9	Workroom	4.9	Garage	1.2	Storage of clothing	0.9	General storage	11.7	Other	6.2
	Families Now Using This Location	Families Preferring to use this Location																																			
Basement	14.2%	34.3%																																			
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TABLE 33. USE OF THE BASEMENT (Contd.)

Survey	Sample	Findings	
(27) <u>The New House Next Door</u> , Better Homes and Gardens, Des Moines, Ia., 1950.	1,960 questionnaires were mailed to families who plan to build new homes.	Basement laundry room planned	52%

Use of Basement (continued)

A survey of rural areas (No. 3) revealed numerous preferred uses of the basement in addition to use for a laundry. Heading the list were: "storage of canned goods"; "washing and drying clothes"; "heating and storage of fuel"; and "storage of produce." Presumably many of the families actually used the basement for these latter activities although there is no data to substantiate this conjecture.

Making a breakdown by economic level, this survey (No. 3) also found that use of the basement varied significantly between the different economic groups. (See Table 34.) It is interesting to note rather wide differences in usage (for most activities) between the upper and lower economic groups.

TABLE 34. USES OF THE BASEMENT BY ECONOMIC GROUP

	ECONOMIC GROUP		
	Upper	Middle	Lower
Storage of canned goods	88.2%	93.4%	95.1%
Washing or drying clothes, or both	59.2	59.8	66.5
Heating and storage of fuels	63.8	58.4	55.5
Storage of produce	59.3	55.5	58.1
Food processing	21.3	23.5	31.1
Place to wash up	18.7	18.7	16.8
Recreation, eating, entertainment	25.4	16.6	15.4
Meat processing	12.0	17.8	20.2
Storage of meat	19.0	15.3	9.2
Workroom	3.6	5.3	5.2
Garage	0.5	1.7	0.5
Storage of clothing	1.6	0.3	2.1
General storage	16.9	11.0	8.0
Other	6.4	6.8	4.2

A breakdown of use of the basement by region was also made. (See Table 35.) It will be noted that the greatest regional difference in use of the basement occurred between the "Appalachian" and the "Cold North."

TABLE 35. PREFERRED USE OF THE BASEMENT IN NORTHEASTERN UNITED STATES

	Region	Coastal	Central	Appala- chian	Cold North
Storage of canned foods	92.6%	87.8%	93.4%	93.8%	93.6%
Washing or drying clothes, or both	61.1	63.4	59.3	70.1	38.7
Heating and storage of fuel	59.0	48.8	62.9	58.1	64.7
Storage of produce	56.9	72.0	57.5	40.9	76.3
Food processing	24.6	28.0	23.4	28.3	13.3
Place to wash up	18.3	13.4	20.4	23.4	5.8
Recreation, eating, entertaining	18.3	29.3	15.0	14.6	22.0
Meat processing	17.0	12.2	25.7	11.0	14.5
Storage of meat	14.9	15.9	20.4	8.8	13.9
Workroom	4.9	7.3	3.6	4.5	6.4
Garage	1.2	—	1.2	2.3	—
Storage of clothing	0.9	2.4	0.6	—	2.3
General storage	11.7	20.7	10.8	7.5	12.7
Other	6.2	8.5	5.4	5.8	5.8

Survey 3, although by far the best in terms of analysis of basement activities, was concerned with rural areas only and, therefore, is of limited significance.

A public-housing survey (No. 26) found that tenants liked basements because of their large areas. Nevertheless, this survey did not recommend basements.¹ Another public-housing survey (No. 19) indicated that basements increased costs 5 to 7 per cent, but that they 1) solved the general storage and laundry problem; 2) provided an excellent place for rainy-day play and pursuit of adult hobbies; 3) kept the heater off the first floor; and 4) were the most efficient and economical place for the heating plant.² These reasons must not be construed as arguments either for or against basements.

Use of the Utility Room—Analysis

As with the basement, most of the surveys indicate that the utility room is planned primarily for laundry purposes. (See Chart XXI and Table 36.) About five-tenths of the surveyees want the utility room primarily for this purpose.

One survey (No. 2), however, showed a wide variety of activities planned for the utility room. Other uses of the utility room may have been revealed by the other surveys had they measured them.

¹Livability Problems of 1,000 Families, NHA, FPHA, p. 3.

²Public Housing Design, NHA, FPHA, p. 115.

A public-housing survey (No. 26) showed the utility room as being very useful and pointed out that, on the basis of an inventory of unstored articles, it "should accommodate a washing machine (unless tenant has access to central laundry facilities); laundry supplies, such as washboard, clothesbasket, ironing board, soaps and soap powder; home-canned foods, particularly for the South and Middle West areas; housekeeping supplies, such as brooms, mops, vacuum cleaner or carpet sweeper; inside drying space, regardless of central laundry facilities; garden tools and equipment, unless a porch closet is provided; and window screens."¹

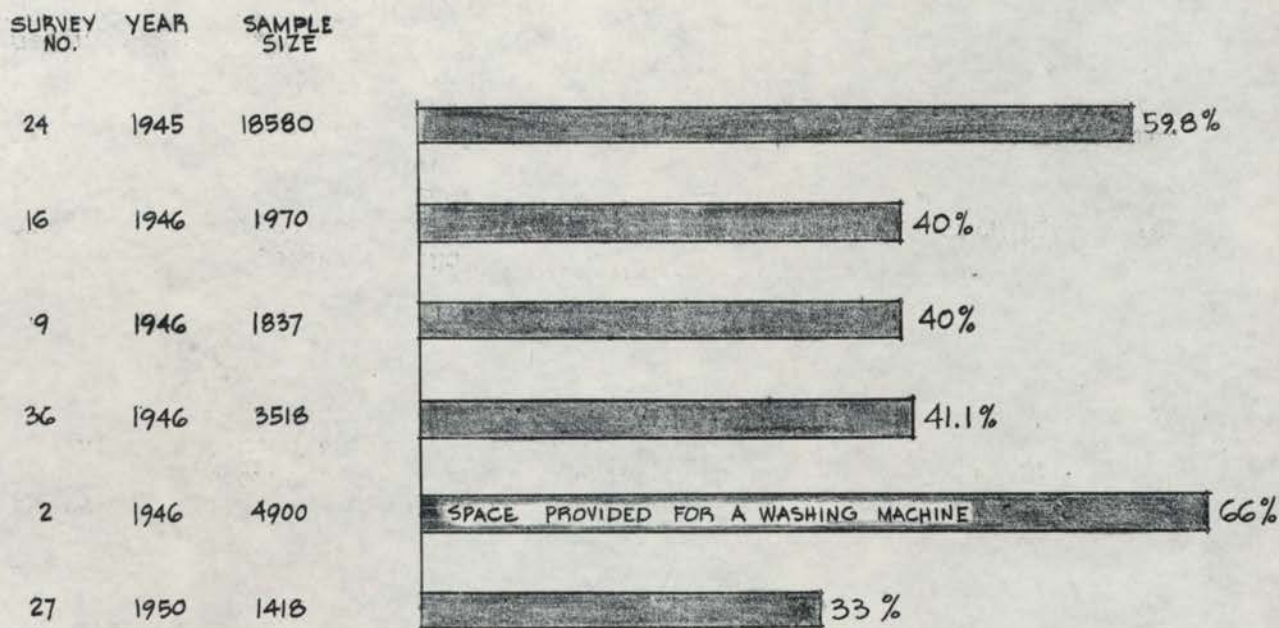


CHART XXI
USE OF THE UTILITY ROOM FOR LAUNDRY

¹Livability Problems of 1,000 Families, NHA, FPHA, p. 42.

TABLE 36. USE OF THE UTILITY ROOM

Survey	Sample	Findings
(24) <u>The American Woman's Home of Tomorrow, Part III, The New House</u> , McCall Corp., New York, N. Y. 1945.	A survey of 18,580 McCall's subscriber families. 79.5% plan to build or buy a new home.	Utility room laundry planned 59.8%
(16) <u>Housing Plans of Families</u> , Crowell-Collier Pub. Co., New York, N. Y., 1946.	A survey of readers of <u>The American Magazine</u> . 1,970 answered a mail questionnaire (66% returns). 27% intend to build or buy new homes.	Utility room laundry planned 40%
(9) <u>Collier's Families Report Their Housing Plans for Tomorrow</u> , Crowell-Collier Research Project, 1946.	A questionnaire was mailed to 3,000 representative Collier reader families. 1,837 families (61%) answered. 16% will build and 10% will buy a house.	Utility room laundry planned 40%

TABLE 36. USE OF THE UTILITY ROOM (Contd.)

Survey	Sample	Findings	
(36) <u>What Kind of Homes do Families with Children Want?</u> Parents' Magazine Home Building Study, 1946.	A survey of readers (with children) of <u>Parents' Magazine</u> . 3,653 families answered a mail questionnaire (26.5% returns). 71.4% plan to build or buy a new home.	Utility room laundry planned	41.1%
(2) <u>Behind the Blueprints</u> , Better Homes and Gardens, Meredith Pub. Co., Des Moines, Ia., 1946.	A survey of 4,900 families who definitely plan to build a new home. Questionnaires were mailed and 42% were returned.	Space Provisions in Utility Rooms:	
		Washing Machine	66%
		General storage	56
		Ironer	50
		Sewing Machine	44
		Canning or freezing	35
		Recreation or hobbies	33
		Home freezer	33
		Clothes drier	28

TABLE 36. USE OF THE UTILITY ROOM (Contd.)

Survey	Sample	Findings	
(3) <u>Beyers, Glenn, Farm Housing in the Northeast,</u> Cornell Univ. Press, Ithaca, New York, 1949.	A survey of 607 farm families in the Northeast. The interview-schedule method was used. No measurement was made of those planning to build or buy.	Present use of <u>utility room</u>	If had one would <u>use it for</u>
		Ironing 2.0%	8.0%
		Sewing 1.8	3.8
(27) <u>The New House Next Door,</u> <u>Better Homes and Gardens,</u> Des Moines, Ia., 1950.	1,960 questionnaires were mailed to families who plan to build new homes. 1,416 questionnaires were returned (72%).	1st floor laundry planned	33%

Comments and Evaluation (Basement-Utility Room)

There is much controversy as to whether or not a house needs a basement. The arguments pro and con are many and need not be repeated at this point. As with the dining room, perhaps much of the individual's attitude toward a basement is based upon his past experiences--that is, whether or not he has lived in a house with a basement.

In the final analysis, cost considerations, varying with local conditions, tip the scales one way or the other. Certain local conditions make basements a liability rather than an asset.

CLOSETS AND STORAGE SPACE

Use of Closets and Storage Space--Analysis

A majority of the surveys, particularly those dealing with public housing, indicate a need for more storage space in nearly all areas of the house. Most of the surveys, however, were not specific enough in determination of amounts of storage space needed for the various articles to be stored. In this respect, the John B. Pierce Foundation survey was better than the average.

This survey determined storage space needs for men, women and children. Men were found to have roughly 2 coats, 2 hats, 5 suits, 2 sweaters, 13 shirts, 24 ties, 19 pairs of socks, 4 pairs of shoes, and 10 sets of underwear. Women were found to have about 15 dresses, 3 coats, 7 pairs of shoes, 5 hats, 1 suit, 2 skirts, 4 sweaters, 5 slippers, 3 brassieres, 6 panties, 5 pairs of hose, 2 pajamas and 4 nightgowns. A child's wardrobe included about 2 coats, 2 hats, from 1 to 10 suits (depending upon age), 9 sets of underwear, 3 pairs of shoes, and 9 pairs of socks.¹ Families had an average of 15.9 sheets, 16.7 pillow cases, and nine blankets, quilts or comforters.²

General Complaints

This survey also revealed that: "Sixty-three per cent of the women feel they do not have enough storage space for their clothes. They (women) report that 48 per cent of the men think they do not have adequate closet facilities."³ Sharing of closets was not liked by either the husband or wife. Eighty-one per cent of the women did not like this arrangement.⁴ In addition, this survey found that 46 per cent of the women did not have adequate storage space for soiled clothes. This is to be inferred from Table 37, which shows where soiled linen was stored.

TABLE 37. STORAGE OF SOILED LINEN

	Group A (66 apartment families)		Group H (67 families in houses)	
	Adults	Children	Adults	Children
Hamper in bathroom	78%	53%	60%	37%
Kitchen tub	5	15	3	7
Laundry bag in closet	15	22	24	16
Washing machine	2	0	2	0
Basement	0	0	9	6
Vanity	0	0	2	4
Pail	2	10	0	0

¹Blum, *op. cit.*, p. 92.

²*Ibid.*, p. 89.

³*Ibid.*, p. 93.

⁴*Ibid.*, p. 68.

A public-housing survey (No. 19) showed somewhat similar complaints about storage space. "Insufficiency of closet and storage space and the absence of doors are among the most chronic complaints by tenants. The first objection is too often valid; the second is debatable. The arguments in favor of doors are familiar: Dust is a problem; curtains are an expense to the tenant; and a closed door offers concealment. Opposed to this is the question of project cost. Incidental arguments are that neatness is promoted by open closets and the absence of door swings favors furniture placement."¹

Another public-housing survey revealed that linen closets were not used for linen and bedding for the following reasons: 1) inadequacy of area (4 square feet or less for all unit sizes); 2) lack of doors on linen closets; and 3) dire need for this storage space for other materials and equipment—groceries, dishes, utensils, and toys.²

Living room and hall closets were objected to because 1) area was too small or inadequate depth; and 2) there were no doors.³ Tenants termed closets with doors "unsightly."

Still another public-housing survey (No. 8) found that inadequate storage space in public housing was possibly the housewife's biggest problem: "Broom closets, wrap closets in the hall and near the back door, cool storage closets, kitchen closets near the stove and near the work surfaces, linen closets, bedroom closets, toy closets are demanded almost vociferously by a people still rather inarticulate as regards its housing needs."⁴

Another public-housing survey (No. 13) determined the articles for which adequate storage space was not provided. (See Table 38.) "Families with small children mentioned carriage storage as one of the major headaches of living in a large project."⁵

¹Public Housing Design, NHA, FPHA, June 1946, p. 108.

²Livability Problems of 1,000 Families, NHA, FPHA, p. 53.

³Ibid., p. 22.

⁴Coit, op. cit., p. 80.

⁵Friedman, op. cit., p. 29.

TABLE 38. ARTICLES FOR WHICH STORAGE SPACE IS NEEDED

Survey	Sample	Findings	
(13) Friedman, Beatrice, <u>Better Housing for the Family</u> , Women's City Club, New York, N.Y., 1948.	A survey of 458 families living in 5 low-cost public housing projects in New York City. No measurement was made of those planning to build or buy homes.	Percent Needing <u>Storage Place</u>	
		Unusual furniture	21
		Toys, bicycles, sleds, etc.	20
		Bedding, blankets, linens	20
		Suitcases, trunks	12
		Supplies, tools, equipment	7
		Drapes, rugs, curtains	6

General Complaints About Storage Space (continued)

One of the public-housing surveys (No. 26) determined, by means of an inventory, articles unstored or articles stored in undesirable locations. They were:

1. Food, including raw vegetables and home-canned foods requiring cool areas
2. Dishes and utensils, requiring both daily-used and infrequently-used space
3. Cleaning and laundry equipment and supplies, including washing machine
4. Clothing, daily and infrequently used, and seasonal
5. Linens and bedding
6. Recreational equipment, including tool chests, collections and hobby materials, and toys
7. Bicycles, perambulators and strollers
8. Bathroom and medicine-cabinet supplies, and clothes hampers
9. Household and garden tools and equipment
10. Screens, in those areas where they are not required on windows the entire year¹
11. Sewing machines.¹

Comments and Evaluation

According to Heiner and McCullough, the three main principles of functional storage are: 1) storage at center of first use; 2) clear visibility of supplies; and 3) easy accessibility of the desired item.²

Another author³ suggests that closet design should contribute to:

Convenience

1. Ease of access
2. Maximum visibility
3. Orderliness
4. Maximum availability or reachability
5. Maximum of used space

Preservation

1. Of pressed condition
2. Of freshness (ventilation)
3. From moths
4. From dust
5. From pilfering

¹Livability Problems of 1,000 Families, NHA, FPHA, p. 59.

²Walsh, H. Vandervoort, Your House Begins With You, p. 41.

³"Household Closets," Architectural Record, May 1944, pp. 105-110.

A United States Department of Agriculture bulletin on closets and storage spaces,¹ points out that adjustable shelves and clothes rods are convenient and are especially fine for growing children. Linen closets are most desirably located if they are near the bedroom or if they open directly into a hall.

Space needs for clothes were determined by Agan.² (See Table 39.)

TABLE 39. SPACE NEEDED FOR CLOTHES

<u>Men's and Boys' Clothing</u>	
Suit	2 inches
Trousers	3
Overcoat	4
Shirt	1½
<u>Women's Clothing</u>	
Skirt	2
House and street dresses	1½
Jacket	3
Evening dress	2
Coat without fur collar	5
Coat with fur collar	6
<u>Girls' Clothing</u>	
Wash dress	1½
Coat without fur collar	2
Coat with fur collar	3

Recommendations for linen closets in public-housing units drawn up as a result of Survey 26 were:

1. Area should be not less than 4 to 6 square feet, varying with unit sizes; depth to be not less than 1'-6".
2. Doors should be provided.
3. Closets should be equipped with 4 shelves extending the full depth of the closet, spaced at 12-inch intervals, with the lowest at a 2'-6" height.³

¹Closets and Storage Spaces, U. S. Department of Agriculture, Farmers Bulletin, No. 1865, p. 1.

²Agan, Tessie, The House, p. 403.

³Livability Problems of 1,000 Families, NHA, FPHA, p. 54.

The few space recommendations made seem inadequate when compared to a recent study¹ (not as yet published) by the Small Homes Council. This study recommends the provision of an accessible clothes closet, 4' wide x 2' deep x 8' high, for each person, plus a drawer space, 2' x 2' x 3'. In addition, provisions for out-of-season clothing and coat-closets are recommended as well as various optional specialized storage units.

¹University of Illinois Small Homes Council Closet-Wall Project, Sponsored by Lumber Dealers Research Council, Progress Report No. 1 (Phase A) by Elizabeth M. Ranney.

HALLS AND STAIRS

Vestibule Preference--Analysis

One survey (No. 29) showed that 31 per cent of the people considered a vestibule a necessity. Another survey (No. 37--of farm families) revealed that 70 per cent of the rural folks wanted a direct entrance to the living room.

According to Field, the most valid objections to having the entrance in the living room are that: 1) water and dirt are tracked into the living room from outdoors; and 2) cold drafts enter the living quarters easily when the outer door is opened. Entrance into a small vestibule eliminates these two objections, but it costs more. Entrance into a stair hall is the most logical.¹

Use of the Stair Hall--Analysis

A public-housing survey (No. 32), however, somewhat invalidates this latter conclusion since: "Testimony shows that the best place for the stair is not facing the front door. It just is not used from there. The stairs should be accessible from the kitchen and living room, and this can be easily done, and has been done, by placing the stair parallel to the front and back walls between the kitchen and living room."² Another public-housing survey (No. 26) emphasized essentially the same thing.

General Complaints

The preceding public-housing survey (No. 26) indicated only a few objections to stairs and hallways: "The principal ones were concrete steps, sand-finished walls, drafts and high hand-rails. Families with small children are constantly distressed over children falling on concrete steps which, based on reports, is very frequent."³

Stairways in Public Housing

Survey 26 recommended well-lighted stairways, and also for the benefit of children, hand-rails 27 or 28 inches high.

Still another public-housing survey (No. 19) stressed additional considerations: "The larger-than-average number of children in public-housing projects produces heavy traffic up and down; it is particularly important, therefore, to design stairs that are easy to climb and well-guarded in the interest of safety. Reasonable relationships between treads and risers; safety nosings for public stairs; absence of winders;

¹Field, Wooster, House Planning, p. 214.

²Wayman, op. cit., pp. 217-222.

³Livability Problems of 1,000 Families, NHA, FPHA, p. 8.

rails of proper height (on both sides if the stairs are wide); and, above all, railings on the wall side sufficiently closed so that they do not permit either deliberate or unintentional passage."¹

Comments and Evaluation

Stairs should be wide enough so that bulky articles can be moved up or down.

As to dimensions and other safety considerations: "The minimum stair width for single-file use is 2 feet; 3 feet is normal standard."² Risers which are 6-1/2 inches require treads, 11-3/4 inches; 7-1/2-inch risers need 10-1/4-inch treads.

"If a doorway is placed at the head of a flight of stairs, which practice has merit from the standpoint of spread of fire, there should be a landing at least 30 inches wide on the stair side of the door. If this landing is omitted, the door should have a glazed window."³

Rierner emphasizes the need for studying and planning adequate traffic circulation: "Good home design requires planning for adequate circulation between the individual rooms, which is almost impossible without a detailed sociological analysis of the routine of family life. An ideal arrangement of communications within the home is one that makes it possible to reach every room directly from the main entrance without crossing any other room."⁴

¹Public Housing Design, NHA, FPHA, p. 110.

²"Planning Units for Service Requirements," Architectural Record, April 1939, p. 106. In addition, this study indicated that: "Pitch (tread-riser ratio) approved by Workmen's Compensation Service Bureau ranges from 30° 35' to 35° 16', allowing a range of riser height from 6-1/2 to 7-1/2 inches and a tread width from 11-3/4 inches to 10-1/4 inches. On this basis, either 15 or 16 risers are satisfactory for a 9-foot floor-to-floor height."

³"Basic Principles of Healthful Housing," Housing for Health, p. 16.

⁴Rierner, Svend, "Sociological Theory of Home Adjustment," American Sociological Review, June 1943, p. 273.

PORCH

Porch Preference--Analysis

It is impossible to obtain a clear picture as to what type of porches are wanted since almost every survey measured a different type--i.e., living, sleeping, front, back, etc. (See Table 40.) An analysis of the surveys indicates that about nine-tenths of the families want some kind of a porch. (See Chart XXII.)

Use of the Porch--Analysis

A public-housing survey (No. 26) concluded that: "Front porches are much more desired by tenants than back, although families use rear entrances more frequently than front. Since most of the families living in apartments prefer living in houses, they too expressed a desire for porches, with a preference for the front. Families who want both front and back porches state they want the front porch to sit on, and the back for children's play, sewing or other work."¹

Surveys indicated a wider than average use of the porch by farm families. (See Table 41, Survey 3.)

A public-housing survey (No. 32) showed that tenants wanted porches 1) to sit outside in the afternoon and evenings, 2) to get away from the work side of the house, 3) to relax and get outside where it is quiet and the outlook is nice, and 4) to leave the baby there.

The use of porches is somewhat a matter of geography. In the south people sit on porches a great deal, but as one moves north they are used less and less and, therefore, are less justified.²

Still another public-housing survey (No. 26) gave some specific recommendations as to porches for public-housing projects, which are, to some extent, applicable to housing in general:

1. Both front and back porches, with overhead protection for all group houses located in southern areas.
2. At least one porch for group houses in Middle West areas.
3. The two-family front or rear porch is not recommended because families inevitably quarrel over it; if provided, adequate area should be allowed for the two families with some type of partition or screening separating the two areas.
4. Overhead protection for entrances to group houses, in all other areas.³

¹Livability Problems of 1,000 Families, NHA, FPHA, p. 8.

²Public Housing Design, NHA, FPHA, p. 115.

³Livability Problems of 1,000 Families, NHA, FPHA, p. 10.

SURVEY NO	YEAR	SAMPLE SIZE
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32	1942	30
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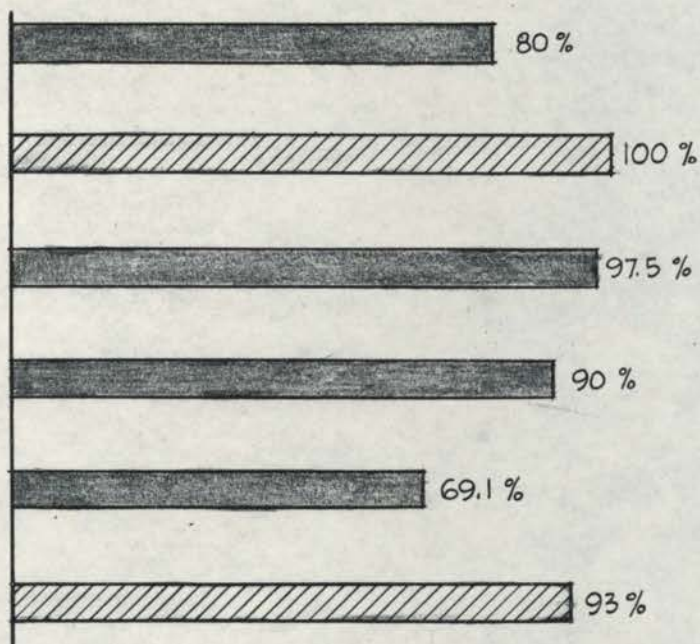
37	1944	1000
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24	1945	18580
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26	1945	1000
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29	1946	4007
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3	1949	607
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	GENERAL SURVEYS
	RURAL SURVEYS

CHART XXII
DEMAND FOR A PORCH

TABLE 40. PORCH DEMAND

Survey	Sample	Findings				
(39) Wilson, M., & Wells, L., <u>House Planning Ideas</u> <u>of Oregon Rural Women</u> , Oregon Agriculture Experiment Station, Bulletin 369, 1940.	A survey of 450 Oregon homemakers. 60% lived on farms and the rest in villages and suburban areas. No measurement was made of those plan- ning to build or buy.	Living porch necessary desirable Dining porch necessary desirable Sleeping porch necessary desirable	<u>Percent</u> 10.5 48.5 9.2 50.0 10.0 55.1			
(32) Wayman, Leonard, "The Public Tenant Speaks", <u>Architectural Forum</u> , 1942.	30 families living in public hous- ing projects in 8 northern cities were interviewed. No measurement was made of those planning to build or buy new homes.	Some kind of a porch Front porch	80% 70			
(37) <u>What a Thousand Farm</u> <u>Families are Going to</u> <u>Do About Building</u> , <u>Successful Farming</u> , 1944.	A survey of readers of <u>Successful</u> <u>Farming</u> . 1,000 families planning to build or buy answered a mail questionnaire.	All of this group wanted at least one porch and some wanted two.	Types of porches <u>had and wanted</u> Glassed Screened Open		<u>Present</u> <u>home</u> 18.0% 30.0 58.3	<u>Postwar</u> <u>home</u> 43.9% 42.5 35.9

TABLE 40. PORCH DEMAND (Contd.)

Survey	Sample	Findings	
(24) <u>The American Woman's Home of Tomorrow, Part III, The New House.</u> McCall Corp. New York, N. Y., 1945.	A survey of 18,580 <u>McCall's</u> subscriber families. 79.5% plan to build or buy a new house.	Back porch Side porch Front porch None	<u>Percent</u> 69.0 40.2 29.9 2.5
(26) <u>The Livability Problems of 1,000 Families,</u> National Housing Agency, FHHA, 1945.	A survey of 1,062 families living in low-cost public housing. No measurement was made of those planning to build or buy.	Porch wanted	90%
(29) <u>Urban Housing Survey.</u> Saturday Evening Post Research Dept., Curtis Pub. Co., 1946.	4,007 families in 35 states and 118 urban centers were interviewed. From 50 to 60% of the interviews were with renters and 40 to 45% were with home owners. 34.3% expect to build or buy a house.	Porch necessary Porch desirable but not necessary Porch unnecessary	<u>Percent</u> 69.1 23.8 7.1
(2) <u>Behind the Blueprints.</u> Better Homes and Gardens Meredith Pub. Co., Des Moines, Ia., 1946.	A survey of 4,900 families who definitely plan to build a new house. Questionnaires were mailed and 42% were returned.	Garage that converts into a porch in summer: Will have this feature Won't have this feature Don't know	<u>Percent</u> 4.0 8.0 39.0

TABLE 40. PORCH DEMAND (Contd.)

Survey	Sample	Findings			
(36) <u>What Kind of Homes do Families with Children Want</u> , Parents' Magazine Home Building Study, 1946.	A survey of readers (with children) of <u>Parents' Magazine</u> . 3,653 families answered a mail questionnaire (26.5% returns). 71.4% plan to build or buy a new home.	Back porch Front porch Side porch	<u>Build</u> 52.0% 31.3 31.0	<u>Buy</u> 55.8% 40.9 29.7	<u>Remodel</u> 46.2% 22.9 43.9
				<u>Total</u> 51.2% 30.4 33.2	
(3) <u>Beyers, Glenn, Farm Housing in the Northeast</u> , Cornell Univ. Press, Ithaca, N.Y., 1949.	A survey of 607 farm families in the northeast. The interview-schedule method was used. No measurement was made of those planning to build or buy new homes.	At least one porch Both front and back porch Front porch only Back porch only			<u>Percent</u> 93 56 24 20
(10) <u>Collier's Housing Quiz</u> , Colliers, Jan. 1949.	A survey of 16,212 readers of <u>Collier's Magazine</u> . No mention was made of those planning to build or buy.	Screened porch			45.4%

TABLE 41. USE OF THE PORCH

Survey		Sample	Findings		
				Usually Used Room	Sometimes Used Room
(2)	<u>Behind the Blueprints,</u> Better Homes and Gardens, Meredith Pub. Co., Des Moines, Ia., 1946.	A survey of 4,900 families who definitely plan to build a new home. Questionnaires were mailed and 42% were returned.			
			Family relaxation	4%	14%
			Entertain guests	1	11
			Play cards	2	11
			Serve refreshments	5	15
(3)	<u>Beyers, Glenn, Farm</u> <u>Housing in the North-</u> <u>east,</u> Cornell Univ. Press, Ithaca, New York, 1949.	A survey of 607 farm families in the northeast. The interview- schedule method was employed. No measurement was made of those planning to build or buy new homes.	Preferred Use of the Porch		
				Summer	Winter
			Sitting, leisure, reading	85.5%	15.5%
			Other recreation or play	7.9	2.9
			Eating	23.6	1.0
			Food preparation	22.5	1.5
			Clothes drying	17.2	34.6
			Ironing	8.2	1.0
			Washing clothes	5.6	2.2
			Storage	4.8	15.7
			Other	21.0	13.5

Comments and Evaluation (Porch)

At least one porch is wanted by practically all families. Again, both the background of the individual and the prestige factor may be basic to this attitude.

Despite the large demand for porches, they are little used except by rural families and by both rural and urban families living in the south; therefore, the inclusion of a porch in the house plans should be questioned. Other needed features might well replace the porch.

In present-day houses there is a trend toward opening the house to the outdoors through the use of large doors, large glass areas, etc. If this trend persists, the demand for the porch may drop off as the living room or dining room becomes a porch in itself.

V. SUMMARY OF SURVEYS

Architectural Styles

Architectural styles show a trend toward "ranch" and "modern", with Cape Cod having a steady following. The description of "ranch" and "modern" is usually left to the surveyee's imagination. If ranch and modern may be grouped under "contemporary", this would be the leading style choice--about three-tenths of the total number of surveyees chose it. Almost as large a percentage is undecided. A tenth of the surveyees prefer Cape Cod. Certain miscellaneous nondescript styles, such as "American farmhouse", "bungalow", etc., are favored by about two-tenths. The choice of architectural style is influenced by region. The preference for contemporary increases as one moves westward.

Number of Stories

The choice in the number of stories desired in a house is consistent with the style of architecture preferred. The majority of the surveyees prefer 1-story homes but there is no consistent trend for this type. The demand for 1½-story homes is static, but the multi-story house (two or more stories) is falling rapidly in popularity. The demand for this latter type remains strongest in New England.

Composition of the House

The "most wanted" house would appear to consist of a living room, a separate dining room, a kitchen with an eating space, three bedrooms, one bath, a basement, and a porch. Setting up a "most wanted" house is, however, unrealistic since such an approach does not recognize the fact that the population of the United States is made up of many socio-economic groups who do not have common needs and attitudes. Instead of one "most wanted" house, it is necessary to think in terms of a "most wanted" house for every major segment of the population.

Nearly all surveyees demand "more storage space."

Three-tenths of the surveyees will accept a combined living and dining room; six-tenths or more want a separate dining room. The majority of the surveyees want an eating space (usually a "nook") in the kitchen.

Families living in public-housing units do not like living-dining room combinations. The space is often too small for their relatively large families. They want a large kitchen with an adequately-sized eating space in it. This group often considers the living room as a sort of a parlor--there is a desire to shut it off in order to keep it orderly and perhaps to use it as a bedroom. Families living in two-story dwellings object to traffic through the living room in order to reach the

stairway. Nearly all occupants of public-housing units prefer a large kitchen-dining combination which will apparently serve more for family living than does the living room itself.

With regard to bedrooms, the most popular house is the three-bedroom, being favored by five-tenths of the families; second is the house with two bedrooms, three-tenths; third is the house with four or more bedrooms, two-tenths. One-bedroom houses are desired by a very small percentage of the families.

There is a strong demand for a workroom in the houses of farm families. The statistics also show that, although basements are preferred by most, a "utility room" is preferred by many—presumably located on the first floor. This appears to be the result of a desire for laundry facilities on the first floor rather than in the basement.

Families with children are interested in appropriate play spaces. This is one of the more difficult problems and few surveys covered the question.

VI. CONCLUSIONS

LIMITATIONS AND VALUE OF SURVEYS

Accurate analysis and correlation of 41 surveys on house design and space use presented a difficult problem. The surveys were made by different groups, at different times, with different purposes. Widely different sampling methods were used. In this analysis of the surveys, the following limitations have been considered and should be borne in mind by the reader:

1. The sample sizes varied widely. The smallest sample was 30; the largest was 18,580. Very small survey samples are of questionable value.
2. The scope of the surveys varied widely. Some were local in coverage and the samples highly selective with respect to income, size of family, building plans, etc. Others were national in coverage, including every geographic area of the United States and representing practically every segment of the population.
3. Some surveys were conducted by mail questionnaire; others, by interview technique. The results of surveys conducted by the latter method are more reliable.
4. The method of calculating percentages varied. Some surveys eliminated the "no answer" group in the calculation of percentages. Certain surveys, moreover, showed multiple answers to a given question, thus confusing the real choice.
5. Questions were not always clearly stated, thus leaving doubt as to the intent of the question and the interpretation of the question by the surveyee.
6. Few surveys were correlated with respect to family characteristics--that is, number of children, age of parents and children, family income, etc.

Certain intangibles are inherent in all surveys. These intangibles influence the replies regardless of the actual questions in the survey. For example, most of the surveys were based on "What do you want in your new home?" In many instances, these desires were not tempered by the hard facts of economics. The number of rooms, room sizes, and other features of the desired house are often reduced when the limitation of the pocketbook is applied.

Few people have the experience needed to make an intelligent choice as to the best house for themselves. For example, in the choice between houses with and without basement--only a limited number of people have lived in both types of houses. Those who have not lived in both types had to weigh what they actually had experienced against what they thought they might experience. Such a choice may prove faulty when tested.

Furthermore, regardless of the objectivity of both the questions and the interviewer, it is almost impossible to get an unbiased response. Thus, allowance must be made for a margin of error due to what sociologists have termed the "human coefficient."

Moreover, the samples of some of the surveys, especially mail surveys, are so select that the value of the results is very questionable. For example, the returns, 7.72 per cent, for Survey 14 were so small that the representative quality of the sample may have been seriously impaired.

Another factor which induces inaccuracies in a survey is the omission of a possible answer. No survey can have all possible answers listed. If the provision for an answer of "Other" was not included in the list of possible choices, a surveyee may not have been able to answer correctly.

One of the most useful types of surveys is that on how existing space in the house is used. Such a survey often showed quite clearly particular space requirements. It must be remembered, however, that the plan of the house itself influences the use of space, thereby prohibiting a free choice in its use.

Surveys of reaction to present dwellings are more useful than surveys which seek to find out what people want without regard to costs. Although the former are often more negative than positive, they do provide suggestions as to what is not desired in a house.

The principal value of the surveys is their heuristic value--that is, they serve to indicate areas needing more intensive and detailed research.

NEED FOR LABORATORY STUDY

The results of this study clearly point up the need for laboratory study. In addition to the limitations pointed out in the preceding section, the analysis proved of limited value from the standpoint of a space study since practically all the surveys were concerned with rooms and room use rather than with family activities and the space requirements for these activities.

Laboratory study can give much more reliable and accurate data than the surveys. In the space laboratory, it will be possible 1) to determine family activities and space requirements for them, and 2) to ascertain whether or not actual behavior coincides with expressed attitude. In addition, the control of many elusive variables will be possible. The unique feature of the proposed laboratory study is that it will facilitate a detailed "case" study of selected families under a wide variety of controlled conditions, each simulating the usual living patterns and social relationships of family life in a house.

A series of cut-and-dried answers will, of course, not be available after an intensive study of only a few families; however, one of the main contributions of the proposed project should be the development of a technique for housing research. Once the technique is developed, enlarging the sample group in order to make it statistically reliable should prove to be a relatively simple problem.

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